STATE OF INDIANA)
) SS:
COUNTY OF DELAWARE)

IN THE DELAWARE COUNTY SUPERIOR COURT

CRAIG DUNN and PHILIP WILEY, et al.,)
Plaintiffs,)
)
-v-) CAUSE NO.
) 18D01-9305-CT-06
RJR NABISCO HOLDINGS CORPORATIONS, et al.,)
Defendants.)

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MR. CASSELL: All rise.
THE COURT: Be seated.
Mornings, ladies and gentlemen.
ALL: Morning.
THE COURT: All right. Jury appears in its entirety, together with the alternates.
Good morning, Counsel.
ALL: Good morning, Your Honor.
THE COURT: I believe we are ready for the next witness for the defense, Mr. Ohlemeyer.
MR. WAGNER: Your Honor, the defense calls Dr. Steven Smith.
THE COURT: All right -- Mr. Wagner.
Good morning.
THE WITNESS: Morning.
DEFENDANTS' WITNESS, STEVEN R. SMITH, SWORN
THE COURT: Be seated, please. Would you tell the jury your name, please.
THE WITNESS: Steven Richard Smith.
THE COURT: And for the record, spell your last name.
THE WITNESS: S-M-I-T-H.

THE COURT: Thank you. Mr. Wagner.
DIRECT EXAMINATION
BY MR. WAGNER:
Q Good morning, Dr. Smith.
A Morning.
Q You were here last Friday to testify, I believe; correct?

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A Yes.
Q And we apologize for not having gotten to you. We were unavoidably delayed. We appreciate you coming back this morning.
Little bit of background. You're a married man, sir?
A Yes, I am.
Q Have children?
A Yes, I do.
Q And lived in [DELETED] all your life?
A Yes, I have.
Q And you're a medical doctor; is that true?
A That is correct.
Q And these are my words and not yours, but you have a specialty that's a little different than most physicians; is that true?
A That is true.

Q And can you tell the jury what that specialty is?
A Yes, my specialty is occupational and environmental medicine.
Q You've been asked to come to court today and give your opinions relating to the cause of Mildred Wiley's death; is that correct?
A That's correct.
Q Specifically, you've been asked as a specialist in occupational and environmental medicine to render an opinion as to whether Mrs. Wiley had primary lung cancer caused by environmental tobacco smoke; is that correct?
A That is correct.
Q Tell the jury a little bit about your education experience starting with college.
A I did my undergraduate work at Indiana University in Bloomington and graduated from there in 1972, and then went to medical school at IU in Indianapolis and graduated from medical school in 1975.
Q Did you receive any scholastic honors during your undergraduate work at Indiana University?

A Yes, I did.
Q And what was that?
A I was named Cum Laude with praise graduate from IU, graduated with honors, and I was also named to Phi Beta Kappa which is a scholastic honor.
Q And you graduated from Indiana University School of Medicine in 1975; is that right?
A Yes.
Q And tell us about your internship after medical school.
A I did my internship here in Muncie, at Ball Memorial Hospital, and did a flexible internship there in 1975 and '76.
Q What did you focus on during that internship at Ball Memorial?

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A The internship was a flexible one, but most of the focus was spent on subspecialties in the field of internal medicine.
Q Have you had any other training or education in the medical field since the completion of your internship?
A Yes, I have.
Q Tell us what that is.
A Yes. I've obtained additional training in

the areas of occupational medicine and preventive medicine through the University of Cincinnati School of Medicine.
Q What particular areas of medicine did you study and receive training in at the University of Cincinnati?
A Yes. The general field of preventive medicine, including the specialty areas therein, including epidemiology, toxicology, industrial hygiene, health services administration, industrial hygiene, I think I mentioned; biostatistics. Those are some of the areas that I studied there, in addition to the subspecialty areas of occupational and environmental medicine.
Q And were you deemed to have a master's in public health equivalency by the American Board of Preventive Medicine as a result of that training?
A Yes.
Q And you're board certified; is that true?
A That's correct.
Q In what area?
A In occupational and environmental medicine.
Q You had to take a written exam to be board

certified in that area; is that correct?
A That is correct.
Q Doctor, I believe you were in the 98th percentile on the specialty exam in occupational medicine; is that true?
A That is correct.
Q And exactly what does that mean?
A Well, the year that I took the board exam, there were 100 physicians from the United States and Canada taking the examination. About 40 of the physicians didn't pass and 60 did. Of the 100, I scored better than 98 of the 100, and one other physician scored better than I.
Q Doctor, you've been licensed to practice in Indiana as a medical doctor since August of 1975; is that true?
A Yes, that's correct.
Q And what hospitals do you currently have privileges?
A Community Hospitals in Indianapolis, Methodist Hospital in Indianapolis, and St. Vincent Hospital in Indianapolis.
Q And in your area of occupational environmental medicine, are you a member of

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professional societies?
A Yes, I am.
Q Can you tell the jury what those are, please?
A I'm a member of the American College of Occupational and Environmental Medicine, the American College of Preventive Medicine, the Indiana State Medical Association, the Indianapolis Medical Society.
Q And I believe you served as a president of the Central Indiana Society of Occupational Medicine; is that so?
A That is correct.
Q And I think you've also received the American Medical Association's Physician's Recognition Award for 1996 and 1998; is that right?
A Yes.
Q Can you tell us briefly what that is, and what that's about.
A Well, this is a distinction awarded by the American Medical Association for physicians who have done additional training in continuing medical education over and above that which is routinely expected.

Q Are you a fellow of any professional organizations and if so, can you tell the jury what that means?
A Yes. I'm a fellow in the American College of Preventive Medicine. I'm a fellow in the American College of Occupational and Environmental Medicine, and I'm fellow of the Central States Occupational Medical Association.
Fellowship is a special award given to members of a college that is an award which recognizes certain additional performance or contributions to the discipline of occupational medicine. The fellowship in the American College of Occupational and Environmental Medicine, you have to be nominated by two of your fellow college members. Then the board of directors takes a look at your contributions, and if they feel as though you have established yourself as having a high level of expertise in the field of occupational and environmental medicine, then fellowship status is awarded. It's the highest membership status that a member of the American College of

Occupational and Environmental Medicine.
Q And I believe that after you obtained your medical degree, you practiced as a physician with the Indianapolis Industrial Clinic from 1976 to 1983; is that right?
A That is correct.
Q Tell the jury briefly generally what that

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practice consisted of.
A Well, the practice of occupational and environmental medicine, as I practice it, is a practice which revolves around the diagnosis and treatment of work-related health problems and environmentally-induced health problems. So I see, evaluate, and diagnose patients in that setting and currently that have health problems that are thought to be related to the environment.

In addition, I spend a fair amount of my time preventing occupational- and environmentally-induced disease, so about 40 percent of our time is spent going onsite to various plants and facilities where people are working with various toxic substances and performing various types of medical examinations to make certain that the people

don't get sick from those substances.

For example, each year we screen over a thousand people in the Indianapolis area for exposures to various types of substances that can cause lung cancer. We have two vans. We go on-site, take X-rays, do sputum cytologies, breathing function tests, those kinds of things, to make certain that people are not becoming ill from their environmental exposure. So not only do I diagnose and treat those kinds of problems, but I also try to prevent them as best possible.

Q Was that description you just gave the jury, was that what you did when you were with the Industrial Clinic from 1976 to 1983?

A That was part of that time, yes. We didn't have vans at that point, but we still went on-site and did those same kinds of things and also saw patients who had various types of health complaints that they thought were related to their environmental exposures.

Q And tell the Court and the jury what your practice involved after 1983.

A I was recruited by Community Hospitals in

Indianapolis to start an occupational and environmental medicine program in 1983, so I went with Community Hospitals then and began a program doing the same types of things but through a hospital-based program as opposed to through a private clinic setting.

Q And that was from 1983 to 1986 for the first time; is that right?

A That's correct.

Q Then I believe you were the company medical director of Indiana Bell Telephone from 1986 to 1987; is that right?

A That is also correct.

Q And since 1987, you've been the director of occupational environmental health medicine for Community Hospitals of Indianapolis; is

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that right?
A Yes.
Q Does that position also include the Community Hospital, which I believe is located in Anderson, Indiana?
A Yes, it does. Community Hospitals of Indianapolis acquired the Community Hospital of Anderson last year, and so my responsibilities also include that hospital.

Q How were patients directed to you in connection with your work at the Industrial Clinic and Community Hospital?
A Well, they come to us through a variety of means. Oftentimes, they're directed to us by their employer because they have a problem that they think is related to their work activities, and so their employer sends them to us.

Sometimes they come to us on their own. They understand that we specialize in treating occupational and environmental health problems, so they come to us in that fashion. Other times they're directed to us by their union, and we have times where we do work for unions and their members' unions in the occupational and environmental medicine arena. Other times they're directed to us by insurance companies, attorneys, both the attorneys representing the claimant or the plaintiff, if you will, as well as attorneys representing the company, or the insurance company. So they come to us in a variety of means.
Q Okay, Doctor. Now, you have practiced

medicine in Indianapolis for over 21 years now; is that right?
A Yes, sir.
Q During that entire time, your area of specialization has been occupational and environmental medicine; is that so?
A Yes.
Q Will you tell the jury and Court, please, what that specialty is. How would you describe it?
A Well, it's a specialty that deals with the prevention, diagnosis and treatment of work-related and environmentally-related health problems. So it's -- it deals with conditions that arise out of environmental exposures and work-related types of activities. It's different than traditional medical specialties.

I think, if you understand, most medical specialties are sort of defined by the body system or organ involved. If you're a cardiologist, you take care of heart problems. If you're a pulmonologist, you take care of lung problems; or sometimes the medical specialty is defined by the

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nature of the type of problem. If you're a rheumatologist, you take care of arthritic kinds of problems; or if you're an oncologist, you take care of cancer.

Our practice is not defined by the body system or the nature of the disease process, but by where the individual contracts the disease and the etiology or the cause of the disease. So anything that is related to an exposure in the workplace or in another environment is within the bailiwick of our specialty.

One of the things that distinguishes the field of occupational and environmental medicine from the typical types of clinical forms of medicine is that we not only have to diagnose and treat the patients that come to us, but we have to go out into the workplace, sometimes, and diagnose and treat the workplace, if you will.

So I have a full-time industrial hygienist who works in our program who goes out. And when I see a patient in the office, and they happen to have a health problem that they think is work related,

it's important to understand that you can't tell from examining a patient clinically, with the exception of very rare instances, whether or not the person's problem is related to the environment or some other problem. No X-ray or physical examination or anything can really distinguish the two.

One has to go out and take a look at what the exposures are and then compare the diagnosis of the workplace, are there exposures in that workplace that would cause this type of a disease process with the patients themselves, and then link the two together. So we diagnose the patient as well as the worker.

In addition, as I mentioned, occupational and environmental medicine is one of the three subspecialties in the field of preventive medicine, so one of our main focuses is prevention, not just waiting for people to get ill or sick from the kinds of things that they work with, but to try to prevent that. So about 40 percent of my time is spent in developing various types of prevention strategies to try to keep people

from becoming ill from their exposures at work and in other environments.

Q And have you had a particular area of interest in your field?

A Yes. Occupational and environmental medicine physicians can have a lot of different interests. Some of them are

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primarily interested in injuries that occur in the workplace, others are interested in diseases. I happen to have a particular interest in diseases, or occupational illnesses as opposed to just occupational injuries. And within that realm I have a particular interest in the field of occupational- and environmentally-induced lung problems.

Q You already touched on this a little bit, I think, Doctor, but let me just sort of tick off here some of the areas in which you've had training as an occupational environmental specialist. Would that include training in epidemiology?

A Yes, it would.

Q Toxicology?

A Yes, sir.

Q Environmental health?

A Yes.

Q Industrial hygiene?

A Yes.

Q Inhalation of environmental agents?

A Yes.

Q Environmental pulmonary disease and the cause of those kinds of diseases?

A Yes, sir.

Q Tell us generally how many physicians are board certified in occupational and environmental medicine.

A Well, I'm not certain exactly how many are now. When I took the examination, there had only been 1,000 physicians in the United States and Canada who had been board certified since the inception of the specialty. I think there are probably somewhere in the range of 1,200, 1,400 physicians in the United States and Canada who are board certified in my area of specialty.

Q You also have a consulting practice in occupational and environmental medicine; is that correct?

A Yes, I do.

Q And do you have a particular interest in that consulting practice?

A Yes. I have a particular interest in the etiology of various types of illnesses, so I'm interested in the cause of what causes a person to become ill and from their environmental exposures.

Q When we talk about etiology, we're talking about cause; is that right?

A That's correct.

Q Do other medical specialists consult you for your opinions as to whether patients' conditions have been occupationally or environmentally caused?

A Quite frequently they do, yes.

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Q What kinds of doctors or whatever would consult you?
A Well, there are two general types. First of all, I have general -- the primary care physicians, if you will, family practice doctors, internists may have patients of theirs who have problems that they're suspicious might be work related, so they will sometimes refer patients to me or call

and ask how they go about evaluating that kind of a problem.

In addition to that, various types of medical specialists will also send patients to me, and those medical specialists, sometimes pulmonologists, lung specialists, will send me patients. Neurologists will send me patients, allergists, and immunologists, oncologists, cancer specialists will send me patients; not to have me treat the person's cancer, but to help to try to find out what the cause of that cancer was; was it related to some type of environmental exposure. Not so much to -- because it really doesn't alter the treatment of that patient, but there may be other people who would be affected the same way if we didn't figure out what the cause of that problem is.

And then also in the field of occupational and environmental medicine, a lot of other occupational and environmental medicine doctors will send me patients, because I have this special interest and expertise in occupational lung cancer.

Q Have you acted in any advisory capacity to any Indiana government agencies?
A Yes, I have.
Q Briefly who?
A I serve as a consultant to the Indiana Worker's Compensation Board and also to the Indiana Attorney's General office.
Q Now, Doctor, I know you've been involved in a lot of cases involving workplace exposures and the causation of disease, but can you just give the Court and the jury two or three examples of the kind of cases so they can get a flavor of the kind of cases that you sometimes work on?
A Yes. It's pretty varied, but some of them would include, I see people who come out of foundry settings and may have been exposed to silica dust and have problems with their lungs related to silicosis. I see people who breathe various types of vapors and fumes in the workplace and may have developed asthmatic kinds of problems. I see patients who have cancer of the lung and the lining of the lung and have had exposures to asbestos and other types of

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agents that may be playing a role in that.
So that's sort of a broad overview of what I do. I take care of dust diseases of the lung, airways diseases such as chronic bronchitis and asthma, as well as malignancies or tumors of the lung and the lining of the lung.

Q Doctor, as an occupational environmental medical specialist, you have from time to time recommended that buildings be smoke free; is that true?

A That is correct.

Q And have you ever made such a recommendation because you believe that environmental tobacco smoke causes lung cancer?

A No, I have not.

Q Let's talk about this case now, Doctor, and start off from the beginning. How and when did you first become involved in this case?

A I believe it was in August of 1997, when you contacted me and asked me if I would consult with you about this case.

Q And prior to August of 1997, had you ever acted as an expert for me or for my law firm?

A No, I have not.

Q And prior to August of 1997, had you ever acted as an expert for any company that manufactures and sells cigarettes?

A No, I have not.

Q Let's talk about what you've done since August of 1997, Doctor. Over the course of the last several months, can you first of all tell us what documents and information you've reviewed specific to Mrs. Wiley, Mildred Wiley.

A I'll give it a go. It's been so comprehensive, I'm not sure I'll get them all the first time through, but I have taken a look at Mrs. Wiley's medical records, all of her medical records dating back to, I think, when she was 23 years of age; including all the records prior to her terminal illness as well as those records that related to her illness. I've reviewed all of her employment records at the VA Hospital in Marion. I've reviewed all her visits to the Employee Health Center there at the VA Hospital in Marion. I've taken a look at data that's related to radon

measurements in her home in [DELETED] . I have taken a look at depositions from all of the -- maybe not all, but a significant number of specialists who are representing both the plaintiffs and the defendants in this litigation and have reviewed their depositions, as well as

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reports from Drs. Roggli, Cagle, Burns, Turner, Songer, as well as experts for the defendants including Drs. Bennett and Porter. And so I think that's some of what I've done.

In addition, I have actually visited the VA Hospital in Marion and taken a walk-through, on-site tour of that facility, and I've taken a look at the architectural plans of that facility; the blueprints, both as the building was constructed back in 1928, as well as various renovations of the building that have occurred since then.

I may have overlooked something, but that's part of what I've done at least with respect to Mrs. Wiley.

Q You've also looked at some documents that relate to radon testing of the Wiley home; is that right?

A Yes, I did.

Q And did you also look at other documents or informative sources about radon levels in Indiana?

A Yes, I did. I took a look at the EPA report with respect to radon levels throughout the state of Indiana on a county-by-county basis and with particular focus on Grant County, Indiana, because that's both where Mrs. Wiley resided and where she worked.

Q And did you read the depositions of several members of Mrs. Wiley's family?

A Yes, I did. I read the deposition of Mr. Wiley, Carla Addington, whom I believe is Mrs. Wiley and Mr. Wiley's daughter, and I think it's Mark Wiley, the son of Mr. and Mrs. Wiley.

Q And did you read the depositions of Mrs. Wiley's co-workers that were taken in this case?

A Yes, I did. I read the depositions of several individuals. I can't remember all the names. Ms. Lavengood, Ms. Pfizer, Ms. Slaughter, Ms. Krider.

Q Krider?

A Yes.

Q And did you also read the deposition of Jon Crisman?

A Yes. I read the deposition of Mr. Crisman, who I believe was the head administrator of the VA Hospital when Mrs. Wiley worked there.

Q Now, during the course of your work as an expert of this case, have you also reviewed medical literature?

A Yes, I have.

Q Now, you may have already touched on this. I'm going to ask you more precisely in a minute to describe what you reviewed, but in a case such as this, why do you have to

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review the medical literature?
A Well, the reason that one has to do this is, with this particular case, is that there is a conflict between various parties with respect to what's the most likely cause of the individual's problem.
With chronic conditions, such as lung cancer, it is sometimes difficult to know for sure what the cause is, and one has to

take a look at the medical literature to see what it says both with respect to the etiology or causes of lung cancer as well as with respect to how likely Mrs. Wiley's problem was to have actually originated within the lung. So I had to take a look at a lot of the medical literature dealing with both the issue as to whether or not environmental tobacco smoke does cause lung cancer in the general population as well as the medical literature with respect to the clinical factors that are pertinent to Mrs. Wiley.
Specifically, the issues dealing with lung cancer, primary lung cancer, the metastatic spread of primary lung cancer, pancreatic cancer, breast cancer, other forms of cancer that may have masqueraded or mimicked primary lung cancer. And one has to take a look at the totality of that information to determine whether or not -- what's the most likely cause of Mrs. Wiley's death, as well as the etiology of that death.
Q You may or may not have mentioned this, but

have you looked at the radiographic studies? I'm talking about X-rays and CT scans and that sort of thing that pertain to Mrs. Wiley.
A Yes, I took a look at all the X-rays, CT scans, MRIs that pertain to Mrs. Wiley. In addition, I consulted with a board certified radiologist and neuroradiologist, and we went over all the films together to take a look at what the findings were radiographically.
Q Is that your standard practice in cases like this?
A Yes, it is.
Q Have you reviewed the literature pertaining to tobacco smoke and, in particular, environmental tobacco smoke?
A I have reviewed extensive information from the literature pertaining to that subject, yes.
Q Did you review the epidemiologic studies that pertain to environmental tobacco smoke?
A Yes, I believe I reviewed about 40 different epidemiologic studies that pertain to environmental tobacco smoke and lung cancer.

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Q What about short-term bioassays and long-term animal studies pertaining to environmental tobacco smoke?
A Yes. I took a look at the toxicological studies, including the short-term gene-tox studies as well as the long-term animal studies pertaining to environmental tobacco smoke as a possible cause of lung cancer.
Q And have you reviewed studies and documents that have been issued by governmental agencies on environmental tobacco smoke?
A Yes, I've taken a look at pronouncements from the United States Surgeon General's Office, the 1986 report, as well as the 1992 EPA report. I've taken a look at reports from NIOSH, the National Institute of Occupational Safety and Health; also OSHA, the Occupational Safety and Health Administration; as well as the Congressional body that took a look at this issue as well.
Q Is it fair to say, Doctor, that you maybe looked at over 100 treatises and articles dealing with environmental tobacco smoke?
A That's a very conservative estimate, I think.

Q You've obviously done a lot of research and study reviewing medical records, employment records, and other documents. Can you estimate for us how many total hours you spent in research and study in connection with your work as an expert in this case?
A I don't know for sure, but I would estimate that with respect to the issue as to whether or not environmental tobacco smoke causes lung cancer, I've probably spent someplace in the range of 100 to 120 hours taking a look at that.
And then in addition, I spent probably another 100 to 120 hours taking a look at the specific factors with respect to Mrs. Wiley. All of her medical records, all of the depositions, and then doing the research in the clinical medical literature as to primary lung cancer, how it presents, how it spreads, so I would estimate someplace between 200 and 250 hours total I've spent in terms of addressing these issues.
Q And I think your hourly rate for performing those types of services is around $240 an

hour; is that correct?
A That's correct.
Q So your total billings for that work would be between 50 and $60,000; is that right?
A I haven't added it up. I don't know how many hours I've got, but I wouldn't question your math.

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Q You've worked as an expert, I believe, in lawsuits for both plaintiffs and defendants; is that correct?
A That is correct.
Q Doctor, let's switch over now and talk about causation. First of all, is there a process by which you as an occupational and environmental medicine specialist determine whether or not a medical condition such as a cancer was caused by a specific exposure to some agent?
A Yes, there is. And that can sometimes be difficult, but we do that, and it's called a medical causation determination.
Q And is that a standardized procedure recognized in occupational and environmental medicine?
A Yes, it is.

Q And are there two broad categories of medical causation determination?
A Yes, there are. The first is the so-called generic causation, and that speaks to the question as to whether or not the individual -- whether or not the exposure causes the disease in the general population.

And then the second is so-called case specific, or specific causation, and that really addresses whether or not the specific individual under question has the disease and whether or not that disease was caused by the exposure in question.
Q Tell us what chronic, as opposed to acute, disease is.
A Well, an acute disease is one that comes on from an instantaneous type of an exposure. For example, if there would be an acute leak of a toxic gas that might be leaked, and the individual developed asthma or airways problems, bronchitis, from that, that would be deemed to be an acute disease, and those are fairly easy to distinguish the cause of those.

Whereas, with chronic diseases, ones where the exposure may have occurred years, decades, scores of, you know, years before, it's sometimes much more difficult because those diseases have multiple factors that can cause them. And there may have been multiple exposures over those decades, and it's much more difficult to precisely identify the causative agent, or the etiology of the condition, if it's a chronic type of a condition.
Q Speaking of cancer, is cancer one particular disease?
A No. Cancer is a series of diseases, in the hundreds of different diseases. And even, for example, lung cancer, there are -- well,

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there are four commonly referred to forms of lung cancer, but actually there are probably 15 to 20 different forms of lung cancer alone.

And with pancreatic cancer, there's one major type, but there are actually five or six general types of pancreatic cancer. So cancer is a myriad of different diseases, in the hundreds, as opposed to one specific

disease.

Q Doctor, you told us just a minute ago about generic causation and specific causation, and I believe that what you do is to sort of combine those two things and you come up with what is, in your specialty, a probability statement. Is that correct?

A That's correct.

Q And I believe there are four; is that right, probability statements?

A Yes. It's important when you're dealing especially with chronic diseases that you try to define how precise or how certain you are as to the cause. And it's --

Q Can you see this board, Doctor, from where you're sitting?

A Yes, I think I can, yes.

Q Does this board describe the four probability statements?

A Yes, it does.

Q It's possible, medically probable, medically conclusive and medically certain; right?

MR. MOTLEY: Your Honor, may I approach?

THE COURT: All right.

(Bench discussion)

THE COURT: We need about five minutes, ladies and gentlemen. I'm going to ask you to go with the bailiff.

(Standard admonition)

MR. CASSELL: All rise.

MR. WAGNER: You can stay there, Doctor.

(Jury not present)

THE COURT: Be seated. Jury is not present. First of all, I've been handed a note from one of the members of the jury that they're having trouble hearing because the plaintiffs' table seems to be a little conversation in there, so let's keep it down a little bit.

The issue before the Court is whether or not this witness should go into the chart that is before the Court now in terms of probability statements. The objection being that past testimony has been based on reasonable medical certainty, and first of all, these would have no relevance.

Mr. Wagner, tell us, or inquire of the witness as to where you're going to go with

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the chart.

MR. WAGNER: All right, Your Honor, let me just ask some of the questions where we were, I think, when we left off.

VOIR DIRE EXAMINATION

BY MR. WAGNER:

Q I think, Doctor, you had told us that the four terms that are on the board there are probability statements that you use in your field of occupational and environmental medicine; is that true?

A Yes. These are accepted concepts that we use when doing a causation determination in our field.

Q And basically, they're various levels of certainty that you use when you analyze a case such as this and determine whether or not an environmental agent has been a cause of disease; is that right?

A Yes, it's based on biostatistical concepts and, basically, if I could explain them, basically what we're trying to do is assign a certain level of certainty or sureness of what we are with respect to with our medical opinion, how certain we are.

And basically it's four different categories, the probable category being less than 50 percent; the medically probable category being greater than 50 percent; medically conclusive being 95 percent or greater sureness of our position; and medically certain being 99 percent or greater. And these are based upon standard biostatistical types of concepts.

Medically conclusive being plus or minus the two standard deviations from the mean, and medically certain being plus or minus three standard deviations from the mean; so these are medical terms that we use, those of us who do causation analyses, try to, as opposed to just say -- well, we think it's more likely than not that this is related to an exposure, we try to define a little bit more precisely what that sureness is that we have, or certainty with respect to that.

So if the information is just medically probable, in other words, it's just more likely than not, we're not nearly as certain of our opinion as if we are medically -- if

the evidence is medically conclusive.

And sometimes we can arrive at a level of medically conclusive, sometimes we can't. Sometimes we can arrive at a level of medically certain, sometimes we can't. But these are standard terms that are used in the development of a medical causation

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determination.
Q And in your specialty of environmental and occupational medicine, is it appropriate to use these probability statements in determining the cause of Mrs. Wiley's cancer?
A I think it's particularly appropriate when you're talking about a chronic disease such as cancer. It's appropriate to try to define exactly, precisely, as best you can, how certain you are. As opposed to just saying well, I think it's not caused or it is caused or whatever, it's important to try to be as scientific about that as we can. And that's what this exercise is, is an attempt to be scientific as opposed to just bring our own belief systems into the opinion.

Q And, Doctor, based upon your education, your experience, your review of all the records and documents you've described, do you have an opinion based upon a reasonable medical certainty and these probability statements that you've described whether Mrs. Wiley died of primary lung cancer caused by exposure to environmental tobacco smoke during the course of her work activities at the Veteran's Administration Hospital?
A I certainly do.
MR. WAGNER: Okay. And then he'll express what that opinion is, Judge.
THE COURT: Care to inquire, Mr. Motley?
MR. MOTLEY: No, but I'd like the witness to be excused.
THE COURT: Sir, I'm going to ask you to step outside. We'll call you back as we need you. Thank you.
THE WITNESS: Sure.
(Witness excused)
THE COURT: All right. The witness is not present. What's the objection, Mr. Motley?

MR. MOTLEY: Your Honor, the objection is exactly as I stated it at the bench. Here we now have this man's -- he goes from whatever -- what this whole case has been tried upon, which he calls more likely true than untrue, that's medically probable; that's his name for it, all the way down to 99 percent certain called medical certainty.
I have no objection whatsoever for this man to have the same standard that's required here, Your Honor. You have a case called the degree of witness' credibility, Rule 702(a).
Now, he has defined his own reasonable degree of medical certainty as 99 percent.

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Everybody else that that's been in here, including the witnesses that Mr. Ohlemeyer questioned, have talked about what's more likely true than untrue, which is what he calls is medically probable.

Now, I don't know, obviously, you haven't told us what your charge is going to be, Your Honor, but this whole case has been founded on the proposition that the

witnesses -- an expert cannot come in here and speculate. They must give opinions that are based on reasonable certainty.

This man's reasonable certainty is 99 percent. I mean, we would have to convict these guys of murder for this standard beyond any and all reasonable doubt. As a former prosecutor, I know that's a stringent burden. This man's burden is even higher than that. I never even heard of in a criminal case, even beyond a reasonable doubt, meeting this man's definition of reasonable medical certainty.

You heard him, Judge. He said 99 percent plus, if I recall correctly. Medically conclusive is 95 percent. This is nothing but shear sophistry here. And, Judge, under Chapter 700, particularly, Rule 702, assisting the trier of facts, and the basis of opinion by testimony by experts, we're going to get in here now, Judge, I'm going to have to bring out dictionaries and medical dictionaries and the like and sit here and engage in a semantical exercise with this man.

That doesn't just go to the weight. This man is using an artificially high percentage of certainty that this case has not been tried on. And, Judge, furthermore, I don't know how -- I mean, I find that extremely confusing. I don't know about Your Honor, but it's certainly misleading under Rule 403.

Your Honor charges the jury what medical probability is, not this guy. And I -- I mean, maybe he's got a textbook somewhere that defines these things this way. I never heard them defined that way. Of course, that doesn't hatter whether I have or not.

But 99 percent certain is not the standard under which we've been trying this case. And for him to now come in and based upon what he claims to be some methodology he had used. No wonder nobody ever wins a worker's comp claim when he's on the other side. He's got reasonable certainty up at 99 percent.

MR. WAGNER: Mr. Motley is just repeating himself over and over again.

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THE COURT: All right. Mr. Wagner, any response?

MR. WAGNER: Yes, Your Honor. First of all, we've already heard from two of the plaintiffs' witnesses, one of whom expressed Mr. Roggli, in answer to Mr. Motley's question about whether or not his opinion be held beyond a reasonable doubt.

Another of the plaintiffs' witnesses, Dr. Songer, testified he was 100 percent certain. There is nothing in the law that keeps an expert witness from testifying that I'm 99 percent certain or 100 percent certain or whatever. I mean, that's his opinion.

Mr. Motley seems to be arguing that you can't do that. That's not the Indiana law.

THE COURT: I don't think anybody's arguing that you cannot ask your witness that very question.

MR. WAGNER: Well, that's what I hear Mr. Motley saying.

MR. MOTLEY: No, sir. I'm not asking that.

THE COURT: I think the question is, does this step process through, is it really, number one, beneficial and does it assist the jury or is it confusing.

MR. WAGNER: As I've explained before, Your Honor, and where we were, before I got interrupted in the direct examination, is that he was simply -- he had testified that in his specialty, as an occupational environmental medicine specialist, they use a probability statement or statements.

And these are the probability statements that they use. He's explained the step process that they go through. He's already explained to you during voir dire here what these various levels mean to him. And then he's going to use those in conjunction with his analysis under generic causation and specific causation, which he has already described, to tell the jury how he reaches his opinion about whether or not environmental tobacco smoke caused Mrs. Wiley to have a primary lung cancer.

It's just an explanation of what he

does. I can't see what the problem is here. I mean, I can't see this jury is going to be confused by it or anybody else. In fact, I would have been through this and out of it 15 minutes ago. And here, Judge, here is -- here's Miller on this, Rule 702(8)(a), does not establish any threshold of certainty.

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THE COURT: I saw that.
MR. WAGNER: An expert, I think, can testify to something; he can say I think it's 51 percent, I think it's 75 percent, he can say I'm unsure, and so forth.
MR. MOTLEY: Your Honor, I have one other objection, and then I'll shut up.
THE COURT: All right.
MR. MOTLEY: In addition, this invades the province of the jury without any reasonable basis, Your Honor.
MR. WAGNER: How can it invade the province of the jury for an expert to express an opinion, Judge?
MR. MOTLEY: I didn't interrupt you. They determine the weight to give a witness' testimony. Now he's creating his own weight system over here, Judge. I don't

object to the man saying he's 99 percent certain.
What I do object to is him taking this term and defining it as an expert. It doesn't help the jury, it doesn't assist the jury, it's not beneficial to the jury, and it's confusing and misleading.
MR. WAGNER: Well, Judge, it isn't confusing, it's not misleading. I've already demonstrated what he's going to say about it. How can it be confusing to the jury? All he's saying is this is an step process I go through as an occupational and environmental medicine specialist in reaching my conclusions, and these are the degrees by which I do that. I mean, that's what he does. There's nothing in the law that says he can't do that.
THE COURT: I understand the point in the testimony now, and I'm not sure I did at the bench conference, but I don't see it's objectionable. You can go through that process, Mr. Wagner. The objection is overruled.
Bring in the jury.

MR. WAGNER: Thank you, Your Honor.
MR. CASSELL: All rise.
(Jury present)
THE COURT: Be seated. The jury back in its entirety. Again state your name for the record, sir.
THE WITNESS: Steven Richard Smith.
THE COURT: Mr. Wagner, you may continue.
MR. WAGNER: Thank you, Your Honor.

BY MR. WAGNER:

Q I think when we had recessed briefly, we had just begun to talk about the probability statements that you as an occupational and environmental medicine specialist use in determining causation. And can you tell us,

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and I don't think you did before the break, what each of those terms means, Doctor.

A Yes. This is a concept wherein we try to assign a level of certainty of how certain we are of our opinions, and I think I mentioned earlier that with chronic diseases, it's sometimes difficult to know for sure whether or not it's caused from a specific exposure.

So in the field of medical causation determination, particularly in the field of occupational and environmental medicine, when we're asked to render an opinion as to whether or not an agent causes the disease, we try to categorize it in one of four categories.

The first category is one of possible, and basically that means anything is possible in the field of medicine. When we say something is possible, we mean that it's medically improbable. It's less than 50 percent likely that that will occur. So from zero to 50 percent falls in the category of possible.

The second category is the category of medically probable, and that's usually what I'm asked. Is it more likely than not that this condition was caused from this exposure. In other words, is it 51 percent likely that this was the cause of this person's condition. And if it is, then we call that a medically probable assessment. It's medically probable that this exposure caused this disease.

Now, with chronic diseases, that's oftentimes the best we can do. We can't get any more refined in our probability analysis than that. But with certain kinds of conditions, if we have enough information, if we have enough exposure assessment data, if we know enough about the disease, if we know enough about the patient's condition, and we've taken a look at the medical literature, sometimes we can be more certain.

And the next category, the third category, is medically conclusive. When we say it's medically conclusive that this person's disease was caused from this exposure, or was not caused from the exposure, we mean that we're 95 percent likely that the disease did or didn't arise out of that exposure.

So this is a much higher standard with respect to the medical causation determination. And we can't usually get there with chronic diseases because we don't know enough about the overall situation. There are multiple causes that could arise

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and so therefore we can't really usually get to that level. But sometimes we can if we have enough data.

The final category is that of medically certain. And when we say it's medically certain that this condition did or did not arise out of an exposure, we mean that it's 99 percent or greater likelihood that the condition was or was not caused by the exposure. And that's rare that we can get to that level, but occasionally we can.

Q Doctor, I'll ask you whether or not, does this poster board then sum up what you just described to the jury as the various levels of probability statements and what they mean?

A Yes, it does. And, of course, when we say possible, that really doesn't mean anything because anything is possible in medicine. So that's the reason I've designated that as meaning there is no utility; it doesn't mean anything to say something is medically possible.

But the other category, when we say medically probable, greater than 50 percent;

medically conclusive, 95 percent; medically certain, greater than 99 percent.

Q In your specialty as an occupational and environmental medicine physician, would it be appropriate to use these probability statements in determining the cause of Mrs. Wiley's cancer?

A Yes, this is standard type of an approach to medical causation determination in my field.

Q And will all of the opinions that you relate to the jury be based on scientifically sound principles that are viewed as critical by medical experts in the field of medical causation determination?

A Yes, they will.

Q Doctor, I want to ask you, based on your education, experience, your review of all the records and documents that you have described and based on reasonable degree of medical certainty, do you have an opinion as to whether Mrs. Wiley died of primary lung cancer caused by exposure to environmental tobacco smoke during the course of her work activities at the Veteran's Administration Hospital in Marion, Indiana?

A Yes, I do.

MR. MOTLEY: Excuse me, Your Honor, I now want to know if he's using this standard or some other standard when he's answering this question.

MR. WAGNER: He's going to answer the question, Judge.

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THE COURT: Well, that's a fair question, unless you want to take that down.
MR. WAGNER: I don't mind taking it down. I've asked the question --
MR. MOTLEY: Well, I'd like the question read back, Your Honor.
THE COURT: You can ask him that on cross-examination.
MR. MOTLEY: Can we mark that, please?
THE COURT: Yes, why don't you mark that last one. Mr. Cassell, if you would.
MR. WAGNER: Well, can I do this in just a minute, Judge?
THE COURT: Well, let's mark it.
MR. WAGNER: All right.
THE COURT: That will be 112.
MR. WAGNER: Thank you, very much.

Do you have the question in mind, Doctor?
THE COURT: Do you want to repeat it?
MR. WAGNER: Let me repeat it, Judge.
THE COURT: Go ahead.

BY MR. WAGNER:

Q Doctor, based upon your education, your experience, your review of all the records and the documents you've described, do you have an opinion based on the degrees of medical certainty used in your field and reasonable medical certainty as to whether or not Mrs. Wiley died of primary lung cancer caused by exposure to environmental tobacco smoke during the course of her work activities at the Veteran's Administration Hospital.

A Yes, I do.

Q And will you tell the jury, please, what that opinion is.

A My opinion is that Mrs. Wiley did not die of primary lung cancer related to her exposure to environmental tobacco smoke from any source, the VA Hospital or anyplace else,

because Mrs. Wiley did not die from primary lung cancer. She died from primary pancreatic cancer with extensive metastases to the chest, the lung, and various other organs.

Q And do you -- can you assign a percentage as to how certain you are of that opinion?

A Yes. I would assign the probability as being the most precise, greater than 99 percent likely. I believe that there's less -- much less than 1 percent chance that Mrs. Wiley died from ETS-induced lung cancer. I believe that it's much greater than 99 percent likely that Mrs. Wiley did not die of ETS-induced lung cancer because she did not die from primary lung cancer.

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Q Now, Doctor, earlier you told us about generic causation and specific causation; right?
A Yes, I did.
Q And did you formulate your opinions in this case by first making a generic causation analysis?
A Yes. I took a look at both of the generic and the case-specific causation with respect

to this case.
Q Now, are there elements that make up generic causation?
A Yes, there are six elements to generic causation and six elements to case-specific causation.
Q And does this poster board depict the general causation elements?
A Yes, it does.
Q I'll ask you some questions a little bit later about the meaning of those six elements but tell us, first of all generally, what you could conclude about generic causation after you analyze those six elements? Are there possible conclusions that you can come to?
A Yes. Once one goes through this generic causation assessment, and here again, that's the question as to whether or not the exposure in question causes the condition in question, in the general population; it's not got anything to do with the specific patient but just in general. Once one gets through with this analysis, one can come up with one of three conclusions: The evidence

is such that one could conclude that, indeed, the exposure does cause the problem, that's number one.

Number two would be the evidence would indicate that it does not cause the problem. And that's much more difficult to do in a generic causation analysis because it's very difficult in the field of medicine to prove a negative, if you will.

And the third conclusion is one at which it would be -- that it's inconclusive. We can't tell from taking a look at the data with a high degree of certainty whether or not the exposure does or does not cause the problem in question.
Q Now, why do you address a generic causation first?
A Well, I think it's probably fairly obvious that if, indeed, the scientific evidence would indicate that the exposure in question doesn't cause the disease in the general population, then it can't cause it in the specific individual. So in order to get to the case-specific causation, you have to first of all have an affirmative answer or a

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yes answer to the generic causation.
Q Now, let's talk about specific causation for just a moment, too, while we're doing this. Are there six elements under specific causation?
A Yes, there are.
Q And does this poster board depict what those six elements are?
A Yes, that poster board does do that.
Q I'll ask you to explain those in a few minutes, too, but let's focus now specifically on this case, and let me put the generic causation board back up here again and kind of ask you to walk us through here, Doctor, with generic causation. Tell us about the chemistry or chemical structure activity element, what that is and what you did there.
A Yes. The way one goes through the generic causation analysis is one takes a look at the medical and scientific literature. So step number one is the chemical structure activity.
And here we take a look at the chemistry of the substance and what the

chemical compounds are in the substance and are they similar to compounds that we know causes or contributes to a disease process. And if there are similarities, then it's more likely that this condition could be caused from this particular exposure, so it's an analysis of the chemistry, if you will, of the substance.
Q What did you do in particular here with respect to environmental tobacco smoke?
A Well, I took a look at what the chemistry was with respect to tobacco smoke in general; mainstream smoke, sidestream smoke, and environmental tobacco smoke. And my conclusion was that environmental tobacco smoke does include many of the same compounds that are found in mainstream smoke and in sidestream smoke. But the difference is that they are markedly diluted. The concentration of these substances in environmental tobacco smoke is markedly diminished compared to what it is in mainstream smoke and sidestream smoke.
And, indeed, some of the compounds that are found in mainstream smoke, in sidestream

smoke, we can't even detect in environmental tobacco smoke. We're not sophisticated to be able to find out even if they're present there. They might be present, but they're at such low levels that we can't detect them.
So my conclusion was from the chemistry

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involved, that environmental tobacco smoke does, indeed, qualitatively have some of the same compounds as mainstream smoke, as you would expect, but it's significantly different primarily because of the concentration and also because there is a -- in addition to this dilutional process, there is also an aging of the compounds that occurs as environmental tobacco smoke is generated.

Q What conclusion did you reach about the chemical structure activity element under this generic causation?

A Well, it's important to take, remember, to understand that the first three steps of this, chemical structure, environmental distribution and pathophysiological mechanisms are all just basically to try to

determine whether or not it's conceivable that the exposure could cause the problem. It's what we call plausible.

And I concluded after taking a look at the chemistry that it was plausible that environmental tobacco smoke might, indeed, cause primary lung cancer in nonsmokers. Because there were some of the same compounds present in the smoke.

However, my conclusion also was modified by virtue of the fact that this extreme dilution of the concentration of these makes it somewhat unlikely that environmental tobacco smoke would cause primary lung cancer in people who were nonsmokers.

Q When you use the term "plausible", what does that mean?

A This is a term that we use to describe whether or not something has some scientific basis as to why it might be possible, or might be true. It doesn't mean that it is true or it isn't true. It means that it's -- it may be true. There's some scientific reason. Let me give you an

example.

It's plausible that eating peanut butter might cause liver cancer. And the reason it's plausible is that peanut butter has aflatoxin in it, and aflatoxin is a mold that is one of the strongest liver carcinogens known to man. So it's plausible that eating peanut butter could cause liver cancer, because there's some scientific basis behind that.

However, we know that eating peanut butter doesn't cause liver cancer, so even though it's plausible, it turns out that it's not true. So that's the difference between plausibility and reality.

Q All right, Doctor, let's go with the second

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element under generic causation, environmental distribution. Can you tell us what that means and what you did with respect to that subject?

A Well, once we understand the chemistry, then we take a look at the physics, if you will, where the substances go in the environment. And what I took a look at there was what is the distribution of environmental tobacco

smoke. What are the concepts that determine how it's distributed. Where does it go, how concentrated is it, is it available for uptake by humans; and so I took a look at the physics, if you will, of the distribution of environmental tobacco smoke in the environment.

Q What conclusion did you come to here?

A Well, the conclusion I came up with is that there are multiple factors that determine how and how intense the exposure to environmental tobacco smoke is. One factor is, of course, how many cigarettes are being smoked in the area. So that would be one thing that would determine the distribution of environmental tobacco smoke.

The second factor that I considered, and that the science would indicate is important in terms of this environmental distribution, has to do with the size, or the volume of the area into which the cigarette smoke is discharged. One has to take a look at the size of the area where the environmental tobacco smoke goes.

And the third factor that I took into

consideration, and which the physics would tell you are important, is whether or not there is a ventilation of the area, if there is a change of the airspace on a regular basis.

So those three factors determine what the distribution of tobacco smoke into the environment is and that -- those are the areas that I took a look at.

Q What conclusion did you come to under that element?

A Well, my conclusion was that environmental tobacco smoke is widely distributed in the area that fills up essentially the volume of the room that it's in, and it becomes progressively more diluted as it spreads throughout the room. And so it is present in the environment. The components of environmental tobacco smoke are present in the environment by definition. But they become diluted and diminished in concentration the further that you get from the exposure.

A concept that we talk about in exposure analysis is distance is your

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friend. So the further you are from the area where the substance is emitted, the less likely you are to be exposed to concentrations that could cause any biological problem for you.

Q And so what did you conclude here under that?

A I concluded, here again, that it was plausible that environmental tobacco smoke could, indeed, cause primary lung cancer in nonsmokers because it was distributed into the air space of individuals who didn't smoke, so therefore it made some sense that it was plausible.

Here again, because of the diminished concentration and because of the other factors involved, the size of the airspace, ventilation, air exchanges, it made it less likely, obviously, much less likely, than for mainstream smoking.

Q And by plausible, you mean something that may or may not be true; is that right?

A That's true.

Q Let's go to the third element, pathophysiological mechanisms. Tell us what

that term, what those terms mean, and what you concluded and what you did there.

A Well, this is where we take a look at the disease under study, what we're talking about; in this particular situation, lung cancer. And what we know about how lung cancer is formed in the body and whether or not then, based upon what we know about how the disease is formed, is that consistent with what we know about this exposure.

And certainly, lung cancer can be caused from breathing in substances that are in your environment. There is no doubt about that. So from that perspective, it was plausible, again, that environmental tobacco smoke, which is in your airspace, could cause primary lung cancer. Didn't mean that it was true; meant that it was plausible.

Now, there are some factors that have to do with the pathophysiological mechanisms that I think are important. We all breathe in things on a daily basis that can cause us to have adverse problems in our lung. But our body has various ways of, if you will,

controlling that, or modifying that type of an exposure. And the pathophysiological mechanisms with respect to ETS and lung cancer are important because the body gets a much, much diminished dose of environmental tobacco smoke components, and it has various mechanisms to filter out, if you will, some

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of these components, to encapsulate them or trap them in the body.

The body's lungs can -- the body's lung has various types of protective mechanisms, the mucus lining of the epithelium or the lining of the lung, there are cilia, which are small hair-like projectiles that can mobilize and move things that have been inhaled and impregnated on this mucus up towards the mouth and eradicate it from the lung. There are macrophages that are various types of scavenger cells that the lung has that can come in and encapsulate, catch these toxic substances and clear them from the body.

So based upon the fact that our body is -- we are blessed with the ability to control exposures to low level of

substances, we have defense mechanisms in our lung that allow us to ward off various types of toxins and carcinogens. So based upon that, even though I felt that the pathophysiological mechanisms were, again, it's plausible that lung cancer could be caused because of exposure to environmental tobacco smoke, I felt that it was much, much less likely because of the ability of the body to control and to ward off these types of things.

The other thing I think is important is the difference in the breathing pattern of a mainstream smoker and the respiratory mechanics, if you will, of intentionally inhaling mainstream smoke deep into your lung and holding it there for a period of time where the constituents of mainstream smoke come in contact with the lining of the lung and can actually be taken up by the cells that line the lung. That's much different than being in an area where you're unintentionally inhaling smaller amounts of diminished concentration of the substances, and so it makes it much less likely that, on

the basis of the pathophysiological mechanisms, that ETS is a cause of primary lung cancer.

Q All right. So then you proceeded to short-term bioassays, I take it?

A Yes. The first three I mention are just plausibility analyses, and that's the first hurdle that you have to get over.

Then you go to experimental studies. In steps No. 4 and 5, you take a look at the literature with respect to the various types of experiments that have tried to replicate the condition in question from the exposure in question. So --

Q Let me interrupt you, Doctor, what are short-term bioassays?

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A Short-term bioassays are tests that are performed in a test tube. They're a test that we use to screen various chemicals to see whether or not they might cause cancer. We basically take bacteria, the Salmonella bacteria, and we introduce into the test tube substances, chemical compounds, and see whether or not it causes any change in the genetic makeup of that cell. And if it

does, then we are concerned that that might be what's called a mutagen. It might be causing genetic alterations, and mutagenicity is one of the first thresholds for possible carcinogenicity. So if it does cause genetic damage, it may cause cancer. Doesn't mean that it necessarily will.

Over 50 percent of the kinds of things that have been tested for mutagenicity with respect to chemicals do cause some genetic mutation. That doesn't mean that they cause cancer. For example, coffee. Two-thirds of the substances that have been tested in coffee cause mutations in Salmonella bacteria. And so -- but that does not mean that coffee causes cancer. It's just another threshold. So this is a test, test tube experiment to see whether or not there's any genetic change.

Q What did you find under the umbrella of short-term bioassays as it relates to environmental tobacco smoke?

A Well, my analysis of this area revealed that at any -- anything near real life types of exposure levels, one does not see genetic

change within Salmonella bacteria from the types of real world kinds of exposure levels that you would see within environmental tobacco smoke.

With very intensely exaggerated concentrations, there have been changes that occur in these bacteria and some other types of changes indicative of genetic damage, but not at real world types of concentrations.

Q All right. So what did you conclude with respect to the short-term bioassays subject?

A Well, I concluded that they were not compelling evidence that ETS was a strongly mutagenic substance. Indeed, there are other substances that we breathe that are actually more mutagenic than ETS, at real-world concentrations. Diesel exhaust fumes is an example of substances that are more mutagenic, cause more genetic change in the test tube than does environmental tobacco smoke.

Q Okay, let's move to the fifth element, long-term animal assays. Can you explain to us, first of all, what those are?

A This is another form of experiment. In this

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experiment in the laboratory, we take animals; mice rats, hamsters, and we subject them to substances that we think may be toxins or may cause cancer, and then we follow these animals and see whether or not they develop cancer.

And so long-term animal bioassays are studies where animals are subjected to exposures and then monitored to see whether or not they develop tumors.

Q And what did you find here?

A Well, here again, at anything near real world kinds of levels of exposures, there is not compelling evidence that, in animals, environmental tobacco smoke causes primary lung cancer. Indeed, most of the studies do not depict any evidence of carcinogenesis in laboratory animals with exposures to environmental tobacco smoke.

Now, there are some studies that if you have grossly exaggerated types of exposure to environmental tobacco smoke, you may get an increased incidence of tumors. Most of those tumors are not cancers, but there are some animals that have been specifically

bred for their capability of forming tumors.

And in some studies, one study in particular that I'm thinking of where there has been an exposure to a very intense level, thousands of times greater than what the exposure would be in the real-world environment, laboratory animals that have been specifically bred to form tumors do develop an increased incidence of tumors, but it's not statistically significant for cancerous tumors, just for benign tumors.

Q All right, Doctor. Let's go to the last, the sixth element there, human epidemiological studies. Tell us first of all what epi studies, if I can call them that, you've reviewed.

A Well, I reviewed approximately 40 or thereabouts of the human epidemiologic studies that were taking a look at ETS and primary lung cancer.

Q And what conclusions did you reach from that review?

A Well, my conclusion was that the epidemiologic studies are the most important. All these other things are just

sort of circumstantial kinds of things that one takes a look at. But really what a substance does to humans is really what we're concerned about.

And based upon my review of the epidemiologic studies, I felt that there was not compelling evidence that ETS is, indeed,

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a documented or proven cause of human lung cancer in nonsmokers.

Q In that review, did you review what are sometimes referred to as the spousal studies?

A Yes. I took a look at the spousal studies, and I specifically focused on the 16 spousal studies in the United States. There are some inconsistencies of the studies across various countries, and so I focused primarily on the ones in the United States. But I took a look at all the spousal studies that had been taken a look at by the EPA when they did their analysis back in 1992.

Q And when we talk about spousal studies, we're talking about the epi studies involving a nonsmoking spouse who lives with a smoking spouse; right?

A Yes, and basically these were females who were nonsmokers whose husbands smoked.

Q The jury's heard some of the definitions before you arrived here, Doctor, of things like bias, recall bias, misclassification and so forth. From your review of the epidemiological studies, what did you find with respect to those kinds of matters?

A Well, the studies are certainly problematic because there are so many defects, if you will, in the study design. There were so many biases. Now, that doesn't mean that the scientists who were doing it were prejudiced necessarily. It just means that the setup, the formulation of the study had so many difficulties that would cause one to not to be able to conclude a causal relationship between the environmental tobacco smoke and lung cancer.

So I felt that there were multiple biases and multiple confounders which really precluded our -- diminished our ability to draw any conclusions with respect to environmental tobacco smoke and lung cancer that could be scientifically validated.

Q In those epidemiologic studies, were there actual quantitative measurements of environmental tobacco smoke to which the people in the studies were exposed?

A No. One of the big problems is a lack of exposure measurement with these studies. The studies basically categorized people as being ETS exposed, the spousal studies just, on the bases of whether or not their husbands smoked. Now, the husband may have smoked in their presence or not in their presence. He may have smoked a lot or not a lot, but there was no actual measurement of what the individual spouses, the ladies whose husbands smoked were inhaling.

And that's the key question. Whenever

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you're doing a risk assessment, you have to have some objective measurement of what the exposure is in order for the study to be really credible, in my opinion. So most of these studies did not measure any exposure levels of the individual. They just basically asked the individual whether or not their husbands smoked or didn't smoke.

Q What did you find in your review of the

studies as to whether the diagnoses of lung cancers in the people involved in the studies were, in fact, verified?

A Well, the diagnoses were "confirmed" in many of the studies. By that I mean, that cancer was proven. Oftentimes when you have a person who has a cough and coughing up blood and have an abnormal chest X-ray, they may not even have cancer but it may look like cancer on the X-ray. So some of the better studies did, indeed, confirm the diagnosis. There was, indeed, a cancer in the lung.

But what the studies didn't do is they did not take a look, by and large, at whether or not that cancer in the lung started in the lung or started someplace else and went to the lung.

Really the only way that you can tell that, and I think Mrs. Wiley's case is a case in point, is by doing a well-performed autopsy. And most of these studies did not have a high level of autopsy confirmation of diagnosis. So this is a potential source of real bias in the study.

We may be labeling people as having

primary lung cancer who don't even have primary lung cancer, and they were included in the group of ETS-exposed individuals who were thought to have lung cancer.

Q Doctor, you're familiar with the Environmental Protection Agency report on environmental tobacco smoke?

A Yes, I am.

Q And didn't the Environmental Protection Agency -- excuse me, the Environmental Protection Agency rely on those studies in reaching its conclusions?

A Yes, I believe that the EPA basically arrived at their conclusion based upon the fact that ETS was qualitatively similar to mainstream smoke. It had some of the same components that we've already gone through, and there were some epidemiologic studies that indicated that there was a low but increased relative risk for the development of lung cancer in those people who were environmental tobacco smoke exposed. So that's, I believe, the basic basis for their opinion.

Q And that relative risk was what?

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A The ultimate conclusion was that the relative risk was 1.19, when one aggregated all of the studies in what's called a meta-analysis, or a pooled-risk assessment. They took all of the studies together and pooled them together and came up with this relative risk of 1.19.

Now, what I think is important to understand that, with the United States studies, the studies they use and then there have subsequently been some additional ones; but of the ones they took a look at, and subsequent ones, there have been 16 epidemiologic studies done on spouses in the United States, of which 15 of those have not revealed a statistically significant increase in environmental tobacco smoke-induced lung cancer. In other words, lung cancer does not arise in a statistically significant increased rate in 15 out of the 16 studies.

One study that was positive. There was a statistically significant increase, but it was a very mild, minor one. What they then did was to group the studies together and

they pooled those studies and then recalculated the relative risk and they came up with a level of 1.19 as being the relative risk.

Which is a very, very low relative risk, particularly in the area of observational or environmental epidemiology. If you see a relative risk of 1.19, that is -- cannot be used as a causal inference in most situations because it's impossible to rule out all of the other factors, these biases and confounders that may be causing the increased incidence, if you will, to be apparent, even though it's not real.

Q When you combine a relative risk of 1.19 with some of the other problems that you found in the studies, like bias and so forth, what is the result, in your opinion?

A The result that I came up with is that the epidemiologic studies, although causing one to have some pause that here again it's maybe plausible that ETS might cause lung cancer, these studies were not at all compelling evidence. They certainly do not prove that ETS causes lung cancer.

They are very weak in terms of their statistical association. They are rife with multiple types of biases and confounding variables that were not corrected for. And so for one to conclude that ETS causes lung cancer on the basis of these epidemiologic studies would, with a pooled risk of 1.19, I

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just do not think that the science would validate that approach to this issue.

Q So, Doctor, do you agree with the Environmental Protection Agency's conclusion that the epidemiological studies prove that environmental tobacco smoke is a cause of lung cancer?

A I do not.

Q And can -- having gone through all these steps that we've been talking about here under generic causation, can you tell us what your conclusion is with respect to the generic causation issue that's relevant in this case, does environmental tobacco smoke exposure cause primary lung cancer in nonsmokers?

A My conclusion is that there is insufficient scientific data that would indicate that ETS

is, indeed, a cause of primary lung cancer in nonsmokers. It may be, based upon the fact that the spousal studies, 15 out of 16 of them, were negative studies, and the workplace studies, 8 out of 9 of those studies were negative, to me, to use those kinds of data to conclude that there is a causal relationship between ETS and environmental -- and lung cancer, is a conclusion that cannot be based on good sound science.

When we see relative risks that are less than 3, particularly less than 2, in the area of observational or environmental epidemiology, one has to be very very cautious about causing -- about deriving any causal nexus between the exposure and the condition in question.

So I was not at all convinced that, on the basis of my generic causation analysis, that ETS does cause lung cancer in the general population.

Q Doctor, before we move on, let me ask you, have any of the professional associations to which you belong adopted positions that

environmental tobacco smoke causes lung cancer?

A Yes, they have.

Q And do you know which ones those are?

A Yes. The American College of Occupational and Environmental Medicine, the college of which I'm a fellow, has a position paper on that.

Q Did it conduct an independent study in reaching that position?

A No, it did not. It did no scientific evaluation of that. Basically --

Q I'm sorry. Go ahead.

A Basically, the statement that came about, came about in, I believe it was February of 1993. The EPA document came out in December

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of 1992. And basically our college just took a look at the EPA report and concluded, based upon what the EPA has said, they articulated a position paper.

Now, I've investigated as to how that came about. I was interested as to whether or not any science was done with respect to that.

MR. MOTLEY: Excuse me, Your Honor.

MR. WAGNER: I think that's enough explanation.

MR. MOTLEY: I have the position paper, but I don't think it's appropriate for him to talk about who he may have called on the phone.

THE COURT: Are you moving on?

MR. WAGNER: Yes, Your Honor.

THE COURT: All right.

Q We won't get into that aspect of it, Doctor. You obviously do not agree with that position.

A That is correct.

Q All right. Earlier you told us that if you reached the conclusion that environmental tobacco smoke was not a proven cause of lung cancer, that you would not need to make a specific causation analysis; right?

A Yes. It wouldn't make sense, if ETS doesn't cause lung cancer in the general population, to take a look at a specific individual.

Q But in this case, I asked you to go ahead and make a specific causation analysis anyway, didn't I?

A Yes, you did.

Q So let me put the specific causation board back up here, Doctor. And let's look first of all at the qualitative exposure assessment, and tell us what that is and what you did in that respect.

A Well, the qualitative exposure assessment is basically just taking a look at what the various substances are in the environment where the individual worked or lived or whatever. So it's just a general assessment of what are the substances in the environment.

Q And then the next one is dose quantification; right?

A That's correct.

Q And what is that?

A There we're trying to calculate how much of the exposure the individual got over time. And it's taking a look at both the concentration and the duration of the exposure and coming up with an assessment as to what the total dose that the individual had in question.

Q And can we talk about these two together?

A Yes, we can.

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Q Okay. And with respect to Mrs. Wiley's case?
A Yes.
Q Let me ask you, did you find, first of all, that environmental tobacco smoke was present in Mrs. Wiley's workplace based upon your review of the documents and information furnished to you?
A Yes. I should point out that there were no industrial hygiene data that actually documented that, which is always my preference. I told you I have an industrial hygienist, and we go out and measure these kinds of things. But there weren't any industrial hygiene data that I was aware of.
But I felt it was certain, as best I could ascertain, that there was environmental tobacco smoke in Mrs. Wiley's workplace at the VA Hospital, because smoking took place there while she was working, so I felt there was some level of environmental tobacco smoke present.
Q And I take it you didn't find any actual measurements of environmental tobacco smoke in her workplace; is that correct?

A No, I -- I asked whether or not -- I asked you whether or not there was any data and you told me that there was none.
Q And since there was none, how did you go about making an analysis of these first two elements?
A Well, I took a look at, basically, several different factors to try to determine what was the most likely exposure that Mrs. Wiley had to environmental tobacco smoke.
And I took a look at the medical literature, the exposure literature that would indicate in workplaces similar to hers what were the routine or typical types of exposures that one would expect.
Then I took a look at the physical plant in which she worked. That's the reason why I went to the VA Hospital in Marion, and took a walk through to see what it looked like.
I took a look at the building plans, if you will, to try to come up with some sort of a mathematical calculation of what the total space that the environmental tobacco smoke was -- went into in her workplace. I

took a look at that.
And then I took a look at the testimony of a variety of different people that had addressed whether or not smoking took place, how much smoking did take place, over what period of time. I took a look at some of the affidavits and testimony of witnesses

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who may or may not have come before you, I'm not sure. I took a look also at the smoking policies that applied during the tenure of Mrs. Wiley's tenure there at the VA Hospital in Marion from 1973 to 1991. I sort of factored all of those things together and came up with what I call a worst-case scenario.

Whenever I'm asked to evaluate an exposure in somebody where I don't have any data, then I always take sort of a cautious or conservative approach and try to take a look at what I think is the realistic worst-case scenario. What's most likely to be the exposure that the individual had, but always erring on the side of caution, if you will.

Q Doctor, in making these kind of assessments,

do you rely on people's descriptions of smoke odors and similar subjects when you do a causation analysis?

A I only rely upon that for the qualitative exposure assessment. That would indicate that there is tobacco smoke present. But you cannot use that to find the quantitative exposure. It's impossible to tell because somebody says that they smelled smoke or they smelled smoke on clothes or in somebody's hair, that cannot tell you what the level of exposure is. Different people have different levels of sensitivity to tobacco smoke odors. And so one cannot conclude just merely by virtue of the exposures -- the individual's odor perception whether or not there was an intense exposure, a mild exposure, a moderate exposure or whatever. One can't really use that as reliable criteria to determine what the quantity of the exposure has been.

Q You told us that you assumed or made a worst-case scenario; is that correct?

A Yes, I did.

Q And does your worst case scenario, in your opinion, overestimate Mrs. Wiley's exposure to environmental tobacco smoke?

A Yes, I believe it's likely to overestimate her realistic exposure.

Q Can you tell us why that's so?

A Well, there are a variety of factors that would indicate that the exposure level that I felt in the worst-case scenario was unlikely to be true, and some of those would include the nature of the types of patients that are in the VA Hospital at Marion.

When I visited there, I was struck by the severe debilitation of these patients. Many of these patients were severely handicapped and impaired. Several of them

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were comatose and in a stupor and some of them were, obviously, unable to have smoked. So I think the type of patient that's present in the area is important. It means that there -- a lot of those patients could not conceivably have smoked.

Now, I understand that the type of nursing facility is no different when I made the visit than it was when Mrs. Wiley worked

there. This is a severe, severely handicapped and debilitated type of a patient setting. So, therefore, that would drive down or mitigate the level of exposure that I thought Mrs. Wiley was really likely to have been exposed to.

In addition, the size of the area that I talked about, I calculated that there were approximately 387 cubic feet of --

Q 387?

A 387,000 cubic feet of real estate under roof, if you will, in the area that Mrs. Wiley worked in. Well, this is a large area. The Building 16 is almost the length of a football field. I believe it's 250 or plus feet, and the square footage is immense on each floor, and the cubic footage is quite large.

So therefore, again, even if there were a significant number of people smoking, this smoke was being discharged into a massive cubic volume. So that's one thing that I think means that it's quite likely that the worst-case scenario doesn't really apply.

Another thing that I think is important

to understand is that this building was built in 1928. It's 70 years old. Buildings now are more prone to what we call a tight building kind of syndrome. There's impaired ventilation or air exchange because in the 1970s, with the energy crisis, there was an attempt to make the buildings tighter, so there's not as much air exchange. But in a building built in 1928, that is not the case. And so this was not a tight building, I think.

And I think that's probably attested to by the fact that it appeared as though there were no significant problems. I didn't see any evidence of problems reported of ventilation problems in the area, if you will.

I also -- my understanding is that the ventilation systems, as best I could understand, the general exhaust ventilation systems were working. And when you think about it, in an area like this, these patients have problems with their own personal toileting habits and whatever. You have to have good ventilation in that area

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or otherwise the odors involved would be just not tolerated. So that's another factor.

I think there are indications that there was times in which the windows in the area were open, which would promote air exchange. Remember the three factors, the number of cigarettes, the size of the room, and the amount of air ventilation. So that would contribute to that. There were air conditioning units in Building 16 which would cause an increased filtration in air exchange.

With respect to Mrs. Wiley, she also spent a substantial amount of her time not in areas where people were actually smoking. She was the charge nurse for a period of time, and then the head nurse, and one would not have expected a person functioning in that type of capacity to be just merely attending people who might be smoking.

The head nurse, the charge nurse, had to do a lot of the nursing care and administrative types of functions. A lot of that would take place in the patient's own

private room. My understanding is that there were restrictions on smoking in private rooms, which would mitigate that type of, or diminish that type of exposure. So that would have played a role in this.

During the time that Mrs. Wiley was the head nurse, I believe the last five and a half to six years of her work there at the VA Hospital, she had her own private office. And I think in that private office she had control of her own airspace. In my reading of the testimony in this case, from depositions that have been provided, is that Mrs. Wiley did not allow smoking in her office. So, there again, that would have diminished the amount of exposure.

A lot of the time that Mrs. Wiley was actually working at the VA Hospital in Marion, she was not actually in Building 16. There were a significant number of times that she would have been offsite doing various types of seminars. The records, employment records, indicate that she was involved in seminars and continuing education and policy meetings and those

kinds of things, committee meetings, which would have taken her outside of Building 16.

There were smoke eaters that were in place during a period of the time. Now, I don't know how effective those were. We don't have any measurements, again, of the environmental tobacco smoke. But certainly

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those would have diminished the exposure. So those are some of the reasons why I think my worst-case scenario is overestimating what her actual exposure was.

Q Doctor, from your review of the records did you find that there were limitations or restrictions on smoking in Building 16 which would also have affected your worst-case scenario?

A Yes, there were -- at various times there were limitations. I don't think smoking took place in all places. As I mentioned, in private rooms it wasn't allowed. There were patients when I was there that there was oxygen around, you couldn't smoke obviously around oxygen. There were restrictions, I think, in terms of when staff members could smoke. They couldn't

smoke constantly.

And I think that, those policies sort of evolved over the decade of the 1970s and 1980s to 1991, when Mrs. Wiley died. But there were certainly some restrictions on smoking that occurred during that period of time.

Q Doctor, did you make an estimate of the total number of hours that Mrs. Wiley spent in Building 16 each year?

A Yes, I did.

Q And did you make a poster board that would illustrate what you did in that respect?

A Yes, I did.

Q And is this that poster board? Can you see it all right?

A Yes, it is. I can see it.

Q Can you explain to the jury what those figures mean? Looks like we got a little tilt here in the --

A Well, what I did was -- whenever you're talking about exposure to an environmental agent, you have to take a look at two things: Basically, the intensity or concentration of the exposure, plus the time

or duration of exposure.

So what I attempted to do was to take a look at Mrs. Wiley's employment records at the VA Hospital and calculated about how many days a year she would have been working based upon vacations, weekends, those kinds of factors.

And I came up with the fact that she would have been, quote, on the clock, if you will, about 225 days a year. And then I calculated, from taking a look at her employment records again, the days that she was offsite, spent at seminars and workshops, and it looked as though --

Q Would that be that figure?

A That would be that figure there, 15 days a

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year. Some years it was more than that, some years it was less, but that's an average.

And so I calculated, therefore, that there were a total of 210 days a year on average that Mrs. Wiley was working in Building 16 at the VA Hospital.

Q Then what did you do with that figure?

A Well, I assumed an average workday of eight

hours a day and then just merely multiplied the number of days time the number of hours per day and came up with a total annual hours that Mrs. Wiley was working in Building 16 of 1,680.

Q Then down at the bottom there, you've got nonsmoking wives, total annual hours of exposure 3,000 to 3,500. What's the significance of that?

A Well, remember that the epidemiologic studies that were done of spouses were the ones that were cited as the reasons why ETS was indeed a cause of lung cancer. And spouses have a greater exposure in terms of numbers of hours per year, if you will, to their smoking spouses than one would get in a workplace type of a setting.

And depending upon family habits, how often people take vacations separately and how often the husband goes fishing on Sundays and that sort of thing, I calculated that the amount of total annual hours of exposure that a nonsmoking wife would have would be in the range of 3,000 to 3,500 hours. In other words, about twice as much

exposure on an annual basis in terms of total number of hours that Mrs. Wiley would have working at the VA Hospital in Marion.

Q You can you kind of tie that together for us. If you use the nonsmoking wives epidemiologic studies, their total hours of exposure, compared to Mrs. Wiley's, what conclusions can you come to?

A Well, a couple of conclusions: One of the things I haven't mentioned is that in my review of some of the exposure data on the generic issue, workplace exposures appear to be significantly less in terms of their concentration than household or residential exposures. The studies that I have taken a look at would indicate that you get less exposure in a workplace setting than you do residing with a smoking spouse.

And that difference may be half as much, a fourth as much, a third as much; but it's substantially less working with somebody than living with somebody who smokes.

And so the combination of that, plus the fact that there are twice as many hours

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that an individual who resides with a smoker is exposed to environmental tobacco smoke as opposed to somebody who works in a smoking workplace, those two factors alone -- together would mean that the amount of total aggregate exposure that a nonsmoking individual working in a smoking workplace would get would be substantially less than what the total amount of aggregate exposure that the wives that were used in the EPA epidemiologic studies would have. It would be much less than half as much total dose exposure.

Q Now, Doctor, did you also estimate the total number of years and months that Mrs. Wiley spent in Building 16?

A Yes, I did.

Q And did you create a poster board that would illustrate what your calculations are in that respect?

A Yes, I did.

Q And is this the poster board that does that?

A Yes.

Q Can you tell the jury what those calculations are?

A Yes. I calculated Mrs. Wiley went to work at the VA Hospital in Marion in August of 1973, and she last worked in April, May of 1991. So she worked there for a total of 17 years and nine months.

And that -- I aggregated the total number of days she worked based upon that analysis I had done before, the number of days per year that she worked, and multiplied that times seven years nine months, and came up with the fact that during her 17 1/2 years of exposure working at the VA Hospital in Marion, she worked a total of 3,750 days.

Q And then you converted that into years; is that right?

A Yes, I did, basically, and that would amount to, if you consider 365 days in a year, that would be the equivalent of ten years and three months of work activities or exposure possibilities.

Q And, Doctor, did you make a comparison of the total years and months that Mrs. Wiley worked in Building 16 to the available data on active smoking and lung cancer?

A Yes. And this speaks to what we call latency. People who are active smokers do not get lung cancer for many, many years.

Typically, active smokers have a latency period between the time that they begin smoking and develop lung cancer of 20, 25, 30, even 40 years. It's extremely rare

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to have anyone who has an exposure latency period of 15 years develop primary lung cancer.

So to me, Mrs. Wiley has an exposure history here of ten years and three months. And since we know that even active smoking, where you're intentionally inhaling and inspiring mainstream smoke down into your lung, usually takes 20, 25, 30 years to develop it at minimum, would indicate to me that it's extremely unlikely that Mrs. Wiley would sustain lung cancer, primary lung cancer, from her exposure during her work activities at the VA Hospital in Marion.

Q Did you find in your review of the documents in this case that Mrs. Wiley expressed a significant aversion to environmental tobacco smoke?

A Yes, I did. I think the record is fairly clear with respect to the fact that Mrs. Wiley did not -- did not tolerate being around smoke very well. She did not like that. And the records would indicate that she did not associate herself with smoking whenever she could avoid it.

Q And how would that affect your analysis of her quantitative exposure?

A Well, that would diminish the amount of exposure, because I believe that whenever Mrs. Wiley had an opportunity to remove herself from an area where smoking was occurring, she would do so.

And certainly when you're the charge nurse or the head nurse, and you have significant administrative responsibilities, you have to schedule staff and you have to do performance appraisals and you have to go offsite to seminars and whatever. All of those things would indicate that the actual amount of exposure that she had would be significantly less than what you would expect if she were, for example, a nurse's aide or somebody who was attending the

patients directly who might have been smoking. So I think that would diminish that actual amount of exposure that she actually had.

Q Doctor, in analyzing Mrs. Wiley's exposure to environmental tobacco smoke, did you review a questionnaire that she filled out in April of 1991 when she sought medical attention for what she thought was an allergy?

A Yes, I did.

Q Let me hand you a copy of that document which has been admitted into evidence in this case.

A Yes, I've reviewed this document.

Q And did you find anything significant to

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your exposure analysis in reviewing that questionnaire that Mrs. Wiley filled out, I believe, on April 17, 1991; is that so?

A That's correct. Yes, I found several things that I thought were relevant. This was a visit of Mrs. Wiley to a Dr. Vessey, an ENT specialist in Marion, who also has an allergy practice.

And there were indications here that would indicate, number one, Mrs. Wiley said that she was allergic to tobacco smoke. That's the only allergy that she listed.

And certainly someone who is allergic to tobacco smoke, particularly if you're a trained, educated health care professional, such as Mrs. Wiley was, you would expect that individual to try to avoid as much exposure as one could if you felt that your allergies were really affected by tobacco smoke.

I found it of some interest that when Mrs. Wiley responded to several questions here, that there were some things that made it appear to me that her exposure to environmental tobacco smoke was not causing her any allergy problems.

For example, the form says, "Which of the following do you think causes your symptoms or make them worse? Indoors or outdoors?" She said outdoors was what made her allergies worse, which would not be consistent with environmental tobacco smoke exposure.

Also, there is a question on the form

that said, "Do you think your occupation has anything to do with your symptoms?" Your allergy symptoms. Her response was, "Don't know."

Well, if you're a nurse, and you think you're allergic to tobacco smoke, I don't think you would have responded "don't know" in that situation if your exposure was as substantial as it has apparently been depicted to be by some in this particular case.

Another question that she responded to was the question, "At work are your symptoms better, worse or the same?" She checked the same. So, in other words, she didn't think her symptoms were any worse when she was at work than when she was away from work.

So those factors, I think, all would indicate to me that it doesn't appear as though she at least, Mrs. Wiley at least, drew any causal nexus between her environmental tobacco smoke exposure and the kinds of symptoms that she was experiencing in early 1991.

I also noted that she said that her

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office did have an air conditioner in it. I mentioned earlier that would tend to diminish the exposure to environmental tobacco smoke some. So I felt those were some of the areas that were significant -- of significance with respect to this questionnaire.

Q Doctor, from your review of the records, did you find that there was a medical department at the Veteran's Administration Hospital where Mrs. Wiley worked to which employees could go if they had medical problems?

A Yes, there is an Employee Health Service there.

Q And did you review those records?

A Yes, I reviewed all the records of Mrs. Wiley's visits to the Employee Health Service.

Q And what of significance did you find from your review of those records?

A Well, Mrs. Wiley was in the Employee Health Service on several occasions. I think I calculated during the 17 1/2-year period 35 different visits to the Employee Health Service there for a variety of different

reasons. Some for TB skin testing, some for health complaints or whatever.

But what I did not see was any -- were any complaints that would be indicative of an intense exposure to environmental tobacco smoke. There were no times, that I recall at least, that she sought medical attention because she was having, oh, irritated eyes or irritated nose or throat or breathing problems, or any of the typical kinds of symptoms that you would expect someone who thinks that they're allergic to tobacco smoke would have if they were in an area where there was intense tobacco smoke exposure.

So I drew from that the inference that it appears as though Mrs. Wiley did not draw any causal relationship between her allergic symptoms and her workplace activities there.

Q Did you see anything in the records about any exposures that Mrs. Wiley would have had to environmental tobacco smoke outside the Veteran's Administration Hospital?

A Yes. I think the records were very clear on that. It appeared as though Mrs. Wiley did

not have environmental tobacco smoke exposure to any source other than at the VA Hospital.

And the reason I say that is that the testimony that has been given via deposition by several family members that indicated that Mrs. Wiley -- first of all, she never

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smoked in her life, so she didn't get any mainstream smoke. And our lung can't tell the difference between mainstream smoke and environmental tobacco smoke. It just knows that it's smoke. So I was struck by the fact that she didn't have any mainstream smoke exposure.

The record is clear that she was born to parents who didn't smoke. She did not smoke herself. She was not exposed to smoke as a child or an adolescent. Her husband didn't smoke. Family members didn't smoke. I think there was one brother-in-law that maybe smoked but he was -- he never smoked in the presence of Mrs. Wiley. The Wileys did not socialize with people who smoked. They did not drive in vehicles with people who smoked. Mrs. Wiley avoided cigarette

smoke whenever she could.

And so she was almost 39 years of age when she first began being exposed to environmental tobacco smoke when she went to work at the VA hospital some Marion. And she died when she was 56 years of age.

So this is not typical of the type of dose-response kind of a mechanism that you would require, with low, low -- low dose exposures, which environmental tobacco smoke is compared to mainstream smoke. You would have expected that if anybody developed environmental tobacco smoke-induced lung cancer, they'd have to have much longer exposure than that. And the record, I saw, as being clear, there was no environmental tobacco smoke exposure anyplace but at the VA Hospital at Marion.

Q Okay, Doctor, can you just sort of sum up for us then what your conclusions are with respect to the first two elements of a specific causation, the qualitative exposure assessment and the dose quantification?

A Yes. My conclusion was that Mrs. Wiley was indeed exposed to some environmental tobacco

smoke, but only during that 17 year, nine month period. It was, I believe, to be a minimal to moderate at worst case scenario exposure. It was not the type of an intense exposure that one would expect, and I do not believe that it is a sufficient exposure to have resulted in primary lung cancer, even if one accepted what I think is a not proven thesis that environmental tobacco smoke causes primary lung cancer.

MR. WAGNER: Judge, I'm about ready to move into another subject. Would this be an appropriate time to take a break or shall I continue?

THE COURT: We'll take the morning break at this point, ladies and gentlemen.

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(Standard admonition)
MR. CASSELL: All rise.
THE COURT: Doctor, you may step down. Thank you.
Be seated counsel. I want to make a record on the deposition objections. This will take a couple of minutes. This is on the Wiley deposition.
The Court previously overruled general

objections. I've considered the specific objections in Volume 1. The objection to page 36, line 14 to 16 sustained. Page 42, line 15 to 23 sustained; page 43, line 1 through 5 sustained; page 63 overruled; page 64 overruled; page 64, 15 to 21 overruled; page 65 overruled.
On Volume 2, page 56, the objection overruled; 57 overruled; 70 sustained; 71 sustained; 72 sustained; 93 -- actually, that is not designated. 123 not designated. 124 sustained; 145 sustained; 146 sustained; 147 sustained; 157 overruled; 159-162, the objection is overruled. All right. We'll break.
MR. WAGNER: What about 159, Judge?
MR. OHLEMEYER: I got it.
THE COURT: Let me look again. 159 through 162.
MR. WAGNER: Through 162.
THE COURT: Page number, those objections were overruled.
MR. WAGNER: Thanks, Judge.
(A brief recess was taken.)
MR. CASSELL: All rise.

THE COURT: Be seated. Jury back with the alternates.
For the record, state your name again.
THE WITNESS: Steven Richard Smith.
THE COURT: Mr. Wagner.
MR. WAGNER: Thank you, Your Honor.

BY MR. WAGNER:

Q All right, Dr. Smith. We moved through the two elements of the specific causation elements. Would you just describe to the jury without getting into any details, but just describe to the jury generally what the next four are.

A Yes. Clinical data is where, when you're doing a causation analysis, you take a look at all the patient's clinical data. You take a look at their medical records, their medical history, their physical findings, the X-ray reports, the laboratory findings, bronchoscopic kinds of findings, all of the various clinical data. Included in that would be the autopsy findings as well.
Medical literature review is where one then takes a look at the medical literature with respect to the disease process under

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question, and to take a look at how well this patient's clinical findings comport or correlate with what's recorded in the medical literature, and compares the two. And is this a typical case of this or an atypical case, so you take a look at what the literature says as it pertains to this specific patient.

An alternative diagnosis is then one -- based upon that review of the medical literature and the individual's clinical data, then one takes a look at what is the most likely diagnosis to explain this person's problem based on what they have on their clinical records as well as what the literature would say.

And then you come up with an assessment as to what's the most likely diagnosis based upon the contemporaneously generated medical records, the records that you already have and what the literature says.

And then finally, alternative causation would be that if you conclude that the disease in question is one that can be caused by the exposure that's under study,

then you take a look at other potential exposures and what the literature says with respect to what other things might be likely to cause that disease. And then you compare that with the factors that have to pertain to this particular patient; in other words, what this particular patient's exposures were.

Because just if you -- just because you're exposed to something that can cause cancer A, doesn't mean that that is, indeed, the cause of that cancer. Because for cancer, there are multiple causes, so you have to a look at all of the potential causes and then take a look back up in number one and two, the individual's exposure data, and see which is the most likely etiology or environmental agent that would cause the problem. So that's what steps 3 through 6 are.

Q Well, Doctor, is it rare for people to be exposed to cancer-causing agents?

A Well, no. All of us, of course, are exposed to cancer-causing agents every day. If you step out on High Street here, you're going

to be exposed to cancer-causing agents, albeit at a reduced dose. There are cancer-causing agents in all the food that we eat. So we're all exposed to cancer on a daily basis. The sun is a cancer-causing agent. There are a variety of different agents that can cause cancer.

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And when one is doing a causation analysis, it is essential that one try to define what is the most likely cause in this particular patient. He could be exposed to cancer-causing agent A, and if one merely concluded based upon the fact that he has a cancer, that can be caused by A, that that was the cause of it, without taking a look at cancer-causing agents B, C, or D, then you've made an invalid assessment. You have to take a look at all the exposure and what is the most likely cause.

Q All right, Doctor. Let's talk about the clinical data. And let's start with Mrs. Wiley's presenting symptoms when she was admitted to Ball Memorial Hospital. Can you tell us what significant findings you found from your review of the medical

records in that respect?

A Yes. With respect to the causation analysis in this particular case, the thing that I -- with respect to her presenting symptoms, the things that I thought were most important were, number one, her chief complaint was one of back pain.

And back pain is a condition which can have a myriad of different causes, but I have concluded that she died of primary pancreatic cancer. And back pain, particularly with a certain part of the pancreas, when it's involved, is the hallmark symptom of that type of problem. And Mrs. Wiley's primary complaint was one of back pain. So I felt that that was an important component.

The nature of the back pain also is important. Back pain -- 80 percent of the population gets back pain at one point or another, so merely having back pain doesn't mean that you have pancreatic cancer. But the nature of her back pain, where it existed, the severity of it, the nature of the way it affected her, was certainly

consistent with primary pancreatic cancer. You don't usually -- you wouldn't expect to see back pain from lung cancer, unless it had spread someplace. But her back pain is different in its character. And it's a classical symptom for a cancer of the pancreatic tail or body of the pancreas to cause back pain.

Another symptom that I felt was important is weight loss. Weight loss -- here again, back pain and weight loss are reported in the medical literature as the two hallmark symptoms of cancer of the pancreatic body or tail. And we're going to show you later what that is, but cancer of the pancreas affecting the body or tail, the

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two symptoms that are leading symptoms are back pain and weight loss, and she had a substantial amount of weight loss.

I believe in January of 1991, she -- her recorded weight was 149 pounds. When she went in the hospital, it was 132 pounds. So that's a 17-pound weight loss, which is about 12 percent of her body weight weight loss, which is substantial. So that was a

significant piece as well.

A third symptom that's of some import is the fact that she had a problem with constipation. And constipation is a symptom, because of the nature of the way the pancreatic gland functions and what happens when it becomes involved with cancer, and how that cancer spreads to the nerves around the pancreas, which control our bowel function, the symptom of constipation is also suggestive of primary pancreatic cancer.

Certainly other things can cause constipation. Just because you have constipation doesn't mean that you have primary pancreatic cancer. But you wouldn't expect constipation to come from primary lung cancer.

So those three symptoms put together, severe recalcitrant back pain that wouldn't go away, despite any sort of treatment; substantial weight loss; and constipation, those three symptoms together are much more consistent with primary pancreatic cancer than primary lung cancer.

Q Doctor, do you have some anatomical charts that would assist you in illustrating the pancreas, how it functions and how it may have caused some of those presenting symptoms?

A Yes, I do.

MR. WAGNER: Judge, with your permission, could the witness come down and put up some of those charts?

A The key issue here is whether or not Mrs. Wiley had primary lung cancer or primary cancer coming from another organ, as I see it, with respect to the specific causation determination. And the organ that I have concluded that she had -- that caused her death was primary pancreatic cancer.

I've put together this illustration just to sort of give you a layout of what -- where we are in the body and orient you to things. And this is the schematic.

Now, not many people know much about the pancreas gland, but it's a major digestive gland that lies deep in the abdomen. And I've delineated it here in this fashion. It's a gland that's about

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five to six inches long, a couple inches wide, and an inch thick, so it's not a very big gland, and it lies deep in the abdominal cavity. Actually behind the abdomen in a space that's known as the retroperitoneal space, and that's important for reasons that we'll talk about.

So to get you oriented, here are the lungs, here are the bronchi going to the lungs, the windpipe and airways, if you will. And bronchogenic carcinoma is another word for primary lung cancer. That means that it arises in the bronchus. Bronchus meaning -- broncho meaning from the airway, and genic meaning starting there. So the primary lung cancer would arise in this area if it occurred, and primary pancreatic cancer is down here.

It has been postulated that Mrs. Wiley had primary lung cancer arising in the bronchus intermedius, which is right here. We'll talk about that as we go through these poster boards.

What I wanted to just show you here was, just to get you oriented, the liver is

here, kidney is here, and here, the spleen is here, and the pancreas lies behind the abdominal wall, behind the intestines, behind the stomach, and behind the liver. It lies deep into the body. So that gets you sort of oriented to this.

And one of the things I sort of wanted to depict here is the fact that the lymphatic drainage in the body goes from the abdomen to the chest. It doesn't go from the chest to the abdomen. The lymphatics drain the pancreatic gland, they drain up into the chest, through the thoracic duct and other lymphatic vessels, and then empty into the circulatory system up in this area.

So that's just to give you a general overview of the pancreas and its relationship to the lungs. It lies in the upper abdomen and just below the diaphragm.

Q Judge -- Doctor, rather, not Judge, but Doctor, tell the jury what the lymphatic system is. I mean, we all know what our vascular system, blood vessels and that sort of thing, what the lymphatic system is.

A The lymphatic system is the third part of

the circulatory system. The arterial, the venous and lymphatic system and fluid that has leaked from the veins and the arteries in our organs has to be cleared in some fashion. And the lymphatic system collects that fluid and then gets it back into the circulation by draining back and dumping

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into the venous side of the circulatory system. So this is a series of multiple lymphatic vessels throughout the body, they're every place in the body, and they collect and drain fluid and other kinds of products that are in organs and drain them back into the circulatory system.

And here I'm trying to just show you that the lymphatic system of the pancreas, here's the pancreatic gland, drains up into the chest, through this thoracic duct.

Now, on this poster board, I've blown up the pancreas gland. And it's essential that you understand the anatomy and a little bit about the development of the pancreas and its function in order to understand Mrs. Wiley's case.

You know, not many of us know that much

about the pancreas. It's a gland that doesn't get a whole lot of discussion. It's a very important gland. It's the major digestive gland in our body.

As I mentioned, it lies deep in the body. And I've asked the medical illustrationist to cut away the abdominal wall, the peritoneum, which is the lining of the abdominal wall, all of the intestines, the stomach, cut away part of the liver, so that you could see the pancreas gland. And here is this pancreas gland.

Now --

Q Doctor, excuse me. You might stand on this side right here so all the jurors can see.

A Okay. A couple of things that you need to know about with respect to the development of the pancreas gland. It really develops in our mother's womb in two different glands and then they fuse together.

The head of the pancreas is this portion of the pancreas that's on your left, over here. And it's this area. It arises out of one part of the gastrointestinal tract which includes the gallbladder and the

liver. They all arise together.

The body of the pancreas gland is this area here, and the tail of the pancreas gland is this area here. The body and tail come out of another part of the gastrointestinal tract. And then during development, in utero, the two fuse together and form the pancreas gland.

Now, that's really important in Mrs. Wiley's case, because her cancer arose in the body/tail portion of the gland. It did not arise in the head of the gland. And the reason why that's important is the two diseases act completely different.

Disease, cancer in the head of the pancreas will cause a different set of

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symptoms. It causes abdominal pain as opposed to back pain. It causes jaundice, which is yellowish discoloration of the skin, which isn't caused with cancer here. And the reason here lies in the drainage that runs through the pancreatic gland.

To orient you, this is the liver, here's the gallbladder and this is the duct that drains the liver and the gallbladder,

and it actually runs right through, courses right through the head of the pancreas.

A tumor that arises in the head of the pancreas oftentimes, about 85 percent of the time, will impinge upon the pancreatic duct and the common bile duct, and it will cause a backup of bile into the gallbladder, and into the liver, and that's what causes one to become jaundiced.

So if you have cancer in the head of the pancreas, you're likely to be jaundiced, likely to have abdominal pain. But if you have cancer in the body/tail of the pancreas, only about 7 percent of the time does this cause jaundice. And that's only once it's spread to involve the head.

Cancer in the body/tail of the pancreas causes symptoms of back pain, like I talked about, and its spread is different. Because of this difference in the way the two parts of the organ develop, there's a different anatomy, different lymphatic drainage, and that's important with respect to Mrs. Wiley's case.

The lymphatic vessels that drain the

head of the pancreas, and these lymphatic vessels are these little green -- these are lymph nodes or lymph glands. You've probably heard those talked about. These lymphatic vessels that drain the head of the pancreas go up along the bile duct and drain into the liver area.

So the head of the pancreas drains this way. Body/tail of the pancreas, which is where I have depicted a tumor here, this is what a cancer in the body/tail of the pancreas would look like; the drainage from this is not to the liver. The drainage from this is in through the diaphragm up into the chest. And so that's the reason why cancer arising in the body/tail of the pancreas will cause different symptoms. It won't cause symptoms of jaundice. It will cause symptoms related to tumor in the chest like Mrs. Wiley had. She had symptoms of cough and hemoptysis and those kinds of symptoms, and the reason is that her cancer arose here.

So you can see I've drawn an arrow here which is depicting the drainage of the

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body/tail up into the chest, and that's the way the lymphatic drainage goes up into this area.

Now, it's important to understand, again, lymphatic drainage doesn't come from the chest down to the pancreas. It goes from the pancreas up into the chest. And that's really important, as we'll see with respect to the metastatic patterns of pancreatic cancer versus lung cancer and why it's exceedingly uncommon to have cancer in the pancreas that's come from the lung, but why it's very common to have cancer in the lung that's come from the pancreas. And this is a very important part of this.

Now, just so you'll get the layout here. This is the left kidney, the tail and body of the pancreas lays right on that. Mrs. Wiley had cancer found at autopsy in her left kidney. It lies right on that area.

And this is the spleen, as I mentioned. These lymphatic vessels, these little green things drain up through the diaphragm up into the chest.

Now, this is a blow-up, a depiction where, if you were lying on your back, it's a cross-section. I've taken a cross-section here, through the abdomen at the level of the pancreas. This is the L2 vertebra. That's the vertebra that Mrs. Wiley -- this portion of her vertebra was completely eaten away. There was no spinus process or posterior elements of that. She had metastases or metastatic tumor that had completely eaten away this part of the vertebra.

This is a cross-section. Here's the pancreatic gland. This is the peritoneum, which is the lining of the abdominal cavity. The pancreas actually lies behind the abdominal cavity right in front of the backbone, and that's the reason why you get back pain with this.

The important other aspect is that the left kidney is in direct proximity to this, and that's where Mrs. Wiley had cancer. She didn't have it in the right kidney. She had it in the left kidney, which is typical for pancreatic tail cancer to go to the left

kidney. These lymphatic vessels -- this is the lymphatic vessel right here that drains up into the chest through the thoracic duct, and Mrs. Wiley had extension of the cancer through that area into the chest.

In addition, not depicted here, but it's important to understand, is that this

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is the spine, and there are multiple spinal nerves that come out in this area. They're call the splanchnic nerves, and they conglomerate in this area.

Those nerves control bowel and bladder function and, particularly with respect to bowel function is the reason why Mrs. Wiley's tumor had invaded those nerves. The severe pain she had was not just coming from the spine. Otherwise, she got radiation treatment which would have helped to alleviate spine pain. Metastases to the spine, it didn't help any, because she had tumor invading the nerves around the pancreas. And this is the reason why the back pain is so severe, was not alleviated by medicine, was not alleviated by radiation treatment and caused her to have

constipation. This is a very typical presentation of pancreatic cancer of the body and tail.

Q What about weight loss? How would cancer in the pancreas cause weight loss?

A Yes. You need to understand the functions of the pancreas, and there are basically two: One is the pancreas forms and excretes various pancreatic enzymes, and they're the most important enzymes in the digestive process. That's the so-called exocrine function.

Throughout the pancreatic gland, there are multiple enzymes that are secreted. They're collected by this pancreatic duct, it drains down and drains right into the duodenum. This is the only part of the intestine that I had the illustrationist leave behind because this is where the pancreatic duct drains.

Those enzymes digest food and cause food to be absorbed. And in the absence of those enzymes, one will not be able to absorb food. One actually becomes malnourished, and that's the reason why

Mrs. Wiley was losing weight. She wasn't losing weight just because of diminished appetite. The weight loss she had was much more profound than what you would expect from somebody who had cancer confined to the lung. That's because this digestive function was completely -- was impaired because of the cancer in this area.

I believe Dr. Songer's note indicated that she had lost 10 or 12 pounds in the last month right before she was hospitalized. You don't get that kind of weight loss, routinely, with lung cancer. You get that kind of weight loss when you not only have a diminished appetite and you're not feeling well, but you're also not

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absorbing what food you get in, so that's an important aspect of that.

While we're talking about function, the other function of the pancreatic gland that is important is the so-called endocrine function. The pancreas also manufactures insulin. That's, of course, what causes us to be able to handle the carbohydrate load so we don't become diabetic, so these are

the two main functions there.

Q What physical -- we've been talking now about the symptoms, presenting symptoms, Mrs. Wiley had. What physical findings in the medical record pertaining to Mrs. Wiley did you find to be significant?

A Well, there were some. There are no physical findings that are specific for pancreatic cancer. It is so deep in the body, you cannot feel the pancreatic gland. There's no way of feeling it, you can't listen to it like you can the lung, there's no way of telling whether or not it's enlarged or got a tumor. There's no way of physically examining it. So there's nothing specific about the pancreatic gland that cancer in the pancreatic gland that shows up on physical examination.

But there were several aspects of Mrs. Wiley's case on the physical examination that were suggestive of primary pancreatic cancer over and above primary lung cancer.

The first one of those would be that there was a rhonchus in the left chest. A

rhonchus is a wheezing kind of sound that you hear when there is some sort of compression or obstruction in the airway.

Now, Mrs. Wiley, the record is clear, did not have any tumor in her left lung. All of the tumor was in the right chest and right lung. So why would she have a rhonchus in the left lung? This was reported, I believe, both by Dr. Songer and Dr. Turner.

The reason is these little green lymph nodes that I'm talking about -- again, remember, cancer from the body/tail drains up through these lymph nodes. And we'll see it depicted better later on, but it goes up into this area, and it will compress -- these enlarged lymph nodes will compress this bronchus. And on the bronchus to the left lung there was some compression. That's the reason they heard a wheezing sound when they listened to the left chest. They didn't hear a wheezing sound in the right chest because she had so much tumor in the right chest there wasn't much air that's moving. But on the left side of the chest

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there wasn't a complete obstruction. There was just a partial obstruction. That's what resulted in the rhonchus.

In addition to that, Mrs. Wiley had a skin tumor. The skin tumor was described as being to the left of the xiphoid process. So, the xiphoid process is the end of the breast bone here. To the left of that would have put it somewhere in this area. That was a tumor that was removed and was the first place they found any cancer was on this tumor on the skin.

Cancer of the lung, particularly adenocarcinoma of the lung, very, very rarely goes to the skin. There can be one study of a hundred cases of adenocarcinoma of the lung, there were zero that went to the skin. It's a very uncommon place for adenocarcinoma of the lung to go to.

Indeed, any carcinoma it's an unusual place for metastases. We don't get very many skin metastases from cancer. But of the ones that do are the types of cancer that do cause it, breast cancer is a common cause of that, and pancreatic cancer.

Pancreatic cancer, one study says it's 7 percent of pancreatic cancers metastasizes to the skin. So Mrs. Wiley had a skin tumor in this general area here that was excised. She also likely had a skin tumor on the front of her scalp and the back of her scalp. Those were not removed, but they were found at physical examination. And Mrs. Wiley related to the doctors that those had not been there before. So I think it quite likely she had tumor in the scalp as well. So those are two physical findings.

The other physical finding that is very important with respect to this has to do again with this lymphatic drainage. There is a condition that is known as Birchowithow's node. These are lymph nodes in the supraclavicular area above the clavicle, collarbone.

Pancreatic cancer is renowned for spreading to that area. Not in the majority of the time, but in 10 to 20 percent of the cases you will have an enlargement of these supraclavicular nodes, these so-called Birchowithow's nodes. And Dr. Songer

detected a large supraclavicular node in her right clavicle and her left clavicle, both sides, there were enlarged nodes.

So those are typical of what are called Birchowithow's nodes. Now, primary lung cancer very rarely does it. Indeed, a major pulmonary pathology textbook says that it's

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extremely rare for Birchowithow's node or a node in the supraclavicular area to arise out of a result of primary lung cancer, particularly with adenocarcinoma of the lung.

So I think those are some of the physical examination reasons that would indicate -- that are significant that it would indicate that it's much more likely that Mrs. Wiley had primary pancreatic cancer than primary lung cancer.

Q How do you spell Birchowithow's nodes?

A B-I-R-C-H-O-W-I-T-H-O-W'S, a Russian pathologist.

Q I believe the medical records reflect there were some laboratory tests run on Mrs. Wiley when she was admitted in May of 1991?

A Yes, there were.

Q Did you review those and find anything significant in the results of those tests?

A Yes. There were things that were very significant with respect to trying to determine whether or not it's primary lung cancer versus primary pancreatic cancer. There were multiple laboratory abnormalities, but the significant one that would allow one to discern which is which, were, number one, she has an elevated blood sugar on three occasions. It wasn't extremely elevated, but it was elevated outside the normal limits.

Mrs. Wiley's last reported blood sugar before she went into the hospital was back in 1987, and I believe that blood sugar was 87. The normal range is about 80 to 110. She had three blood sugars, all of which were elevated during her hospitalization at Ball Hospital. And you wouldn't classify her as being diabetic, but you would classify her as having hyperglycemia or elevated blood sugar.

It's also important to understand Mrs. Wiley was losing weight and was

essentially not having much caloric intake at all. This poor woman was really suffering at this point and really was not ingesting much food so, therefore, these were done in a fasting kind of a state. So the elevated blood sugar is sort of another hallmark of primary pancreatic cancer.

You don't get an elevated blood sugar from primary lung cancer. You do get an elevated blood sugar from primary pancreatic cancer. Here again, remember, I talked about that endocrine function, the secretion of insulin. If you have a tumor that's eating up the pancreatic gland, there's not enough pancreatic tissue there to keep up with the sugar load that one gets. So I

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think those three blood sugar elevations are suggestive of primary pancreatic cancer and certainly would not support primary lung cancer.

Another laboratory finding which is very important was what we called hypoproteinemia, or hypoalbuminemia, and this is a diminished level of protein or albumen in the blood. And this is basically

an indication of our level of nutrition, how nourished or malnourished we are.

Mrs. Wiley had a very low serum protein and albumin level, and this, again, is very typical of somebody who has malnutrition related to primary pancreatic cancer dysfunction. Remember, that exocrine function, the secretion of the enzymes, the amylases and lipases and proteases that allow our bodies to digest food and absorb food. They don't work anymore, so therefore, we don't absorb the nutrients that we need, and we can't -- our body cannot keep up with its demands and we get a low protein. So that is also another laboratory finding that I think is very suggestive of primary pancreatic cancer and not at all suggestive of primary lung cancer.

Q Doctor, are there laboratory tests that are or can be performed on patients to evaluate whether or not they have pancreatic disease, including pancreatic cancer?

A Yes. It's very easy to do. And there are tests that are known as serum lipase and

serum amylase. Those are those two enzymes that I mentioned that the body uses to help digest food. If there is a blockage of the gland or if there is malfunction of the gland, there is oftentimes, in about 25 to 35 percent of cases of primary pancreatic cancer, there will be an elevation of those amylase and lipase levels. And those tests were not done in Mrs. Wiley's situation. They were very simple, could have been done.

Anytime you see somebody that you suspect has a pancreatic problem, whether or not it's alcoholic-induced pancreatitis or gallstone-induced pancreatitis or pancreatic cancer, the first test that you do is an amylase level to see whether or not there is an abnormality. Now --

MR. MOTLEY: Excuse me one second, Your Honor. Could the doctor slow down just a one second, so I can write down these words, because I didn't know how to spell amylase.

THE COURT: Can you spell that, Doctor?

THE WITNESS: A-M-Y-L-A-S-E and

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lipase is L-I-P-A-S-E.
MR. MOTLEY: L-A.
THE WITNESS: L-I-P-A-S-E and protease, P-R-O-T-E-A-S-E.

A So that test could have been done.
Q But those weren't performed in this case?
A They were not performed. Indeed, I saw no indication there was ever any test done to evaluate whether or not Mrs. Wiley had primary pancreatic cancer; any laboratory tests, any X-ray study, nothing that would be -- we would routinely use to try to evaluate primary pancreatic cancer.
Q Did you review anything in Mrs. Wiley's medical records pertaining to her treatment in May or June at Ball Memorial that related to breast cancer?
A Yes, there was a laboratory test that -- is that what you're referencing, the laboratory study?
Q Yes.
A Yes, there was a test that was done by Dr. Songer. The doctors who were attending Mrs. Wiley at the point that she was in the early June 1991 time frame were not really

sure where her cancer came from. And Dr. Songer, a cancer specialist, was asked to see her.

And Dr. Songer ordered a laboratory study known as a CA15-3 which is what we call a tumor biomarker. CA15-3 is a test which is designed to try to help to screen or detect breast cancer. And the CA15-3 was markedly elevated, I believe her level was 100. The normal range is between zero and 25. It is not a test that's specific for breast cancer. But it is very suggestive of breast cancer. And Dr. Songer had ordered that study and it was quite high.

On the basis of that, Dr. Songer believed that it was reasonable to accept the fact that she might be suffering from primary breast cancer, and so treatment was initiated to treat her for primary breast cancer with a medication called Tamoxifen. Now, I don't think she had primary breast cancer, but that test was very suggestive of that.

The other thing that's pertinent about that test, that CA15-3 test, the level was

100. Well, I've taken a look at the medical literature with respect to that. Remember I said it's not specific for breast cancer.

There are other things that can cause it to be elevated, including pancreatic cancer can cause it to be elevated. Lung cancer can cause it to be elevated, but I

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did a study and took a look at the literature in which there were 29 cases of primary lung cancer, the highest level that was reported of any of those was a level of 39. Well, Mrs. Wiley's level was 100, which is not typical or consistent with primary lung cancer. So I think that's another aspect of her laboratory study that's relevant.

Q Did you find anything significant in the radiographic materials and the bronchoscopies pertaining to Mrs. Wiley?

A Yes. I did. The radiographic studies, here I'm talking about her chest x-ray, her CT scan of her chest, CT scan of the abdomen and pelvis. Those were relevant in that they did not detect any lesion within the bronchus itself. Bronchogenic or primary

lung cancer arises within the bronchus; bronchus in the vast majority of the cases. That's the reason why it's called bronchogenic carcinoma, as I mentioned.

The CT scan did not depict any tumor in the bronchus. It did not depict anything that would be typical of a primary endobronchial lesion that you would expect to see with primary lung cancer.

What it did depict was extensive enlargement of lymph nodes in the chest, in the mediastinum, which is this area here, and around the bronchus, particularly around the right side of the chest.

And as I mentioned before, remember, this pancreatic tumor drains up into the chest, into these lymphatic vessels.

So the CT scan of the chest, which you often will see in endobronchial lesions, if you're talking about primary lung cancer, did not depict that.

In addition, the CT scan of the chest showed a finding that is -- and I consulted with a radiologist about this because I don't read CT scans of the chest, and the

radiologist --

MR. MOTLEY: Excuse me, Your Honor, he can't come in here and tell us --

Q Don't tell us what the radiologist said, Doctor, but tell us what --

A Well, my conclusion was that there was -- there were findings in the chest of lymph node enlargement which tracked all the way down into the abdomen. And as I mentioned earlier, remember, the flow of the lymph fluid is up from the abdomen to the chest, not vice versa. And there were enlarged lymph nodes in the mediastinum which tracked from the abdomen.

So my conclusion was that the radiographic findings of the chest did not

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depict anything that would be typical or diagnostic of primary lung cancer. They were much more suggestive of a tumor arising in the abdomen, going into the chest; metastasizing into the chest.

Q I'm sorry.

A In addition, there were radiographic studies of the abdomen. There was a CT scan done of the abdomen and pelvis. Now, these studies

were not specifically designed in any one organ. There is a specific type of study that needs to be done to visualize the pancreas. It's a pancreatic CT scan. That was not done. But there was a general CT scan done of the abdomen.

It did not depict or delineate the pancreatic gland very well. They couldn't see it very well. It says I think in the radiographic report not well visualized but not enlarged.

Well, the difficulty with that is that the pancreatic gland is one which is somewhat difficult to visualize with a regular x-ray, but with a CT scan you can usually see it unless there is tumor around it and the tumor has invaded into these lymphatic vessels and the nerves and the space around it.

When that happens, you lose the tissue planes in between the normal pancreas and the structures around it, and therefore you can't visualize the pancreas. So this is something that's suggestive, certainly not diagnostic of pancreatic cancer, but

certainly suggestive of that.

And indeed there was, on one of the cuts of the CT scan, there was a small ill-defined density near the tail of the pancreas, which would be suggestive of a possible extrapancreatic extension of a pancreatic tumor. Not diagnostic but certainly suggestive.

The other thing that's pertinent about the radiographic findings of the abdomen were the studies that were not done. I mentioned there was not a pancreatic CT scan done. In about 95 percent of the cases a well performed CT scan of the pancreas will depict the tumor. If it's microscopic in size, it may not. And we'll find out the pancreatic tumors can be microscopic.

But if the tumor is this big, it will be depicted on the CT scan of the pancreas.

In addition, the study we do now to definitively diagnose this, and it was available back in 1991 when Mrs. Wiley was ill, is what's called an ERCP. That's were you take an endoscope, go down through the esophagus, the stomach, into the duodenum.

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And then we put a little catheter up into this pancreatic duct here, and we inject dye retrograde into the pancreatic gland.

An ERCP study helps us in diagnosing primary pancreatic cancer, because if there's a tumor here, this is this pancreatic duct here, the dye will flow to here, and it will be cut off. And that cutoff sign is indicative of a tumor a cancer in that area.

So the fact that there was not pancreatic CT scan done or ERCP done or an ultrasound of the pancreas. An ultrasound of the pancreas is sensitive in about 80 percent of pancreatic cancer cases. More so in the head than in the body. You really should do a CT scan here.

But I think it's indicative of the fact that no one was thinking pancreatic cancer. No laboratory studies were done for pancreatic cancer, no radiographic studies were done for pancreatic cancer.

Q Okay, Doctor. You've reviewed the two bronchoscopies that were performed in this case by Dr. Patel and Dr. Turner?

A Yes, I have.

Q And can you illustrate to the jury what the significance was of those bronchoscopies with a couple of charts? Let me take these down for you and you can get the others.

MR. MOTLEY: Your Honor, could we mark -- let's see. Can I look over here, Mr. Wagner, for a second?

MR. WAGNER: Sure. Help yourself.

MR. MOTLEY: Let me see which one.

THE WITNESS: May I proceed or wait?

MR. MOTLEY: Just one second.

Your Honor, can we mark this, keep it in the courtroom for a while.

MR. WAGNER: Sure.

MR. MOTLEY: May I hand it to Mr. Cassell?

THE COURT: 113.

Q Doctor, I asked you about whether or not you had reviewed the two bronchoscopies performed by Drs. Patel and Turner and what significant findings you found from that review.

A Yes. Let me orient you again to the lungs

that I talked about a little bit. This is a blown up area of the lung. The left lung with its two lobes, and right lung with three lobes; the right upper lobe, the right middle lobe and the right lower lobe.

Here is the trachea or the windpipe coming down to the breathing tubes, the

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bronchi. And these -- this is the lymphatic drainage, again, from the upper abdomen, including the pancreatic gland, up into the thoracic gland, into all of these multiple lymphatic nodes and vessels in this area.

The source of where Mrs. Wiley's pathology in the lung was primarily focused is so-called bronchus intermedius, and that's this area right here. The right main bronchus comes down and gives off the bronchus to the right upper lobe, which is what this is, and then after that, from here to here is the bronchus intermedius. This is the area where Mrs. Wiley's pathology was thought to have arisen.

So this oriented -- and this is the bronchus to the right middle lobe and the bronchus to the right lower lobe.

Now, with respect to Mrs. Wiley's pathological state, this depicts the reason why her bronchoscopic findings by both Dr. Patel and Dr. Turner are consistent with metastatic tumor to the chest as opposed to being related to primary tumor within the bronchus.

Q You're talking about a cancer that spread to the lungs rather than originating in the lungs?

A That's correct. And cancer that spreads to the lung from the abdomen or from other organs can do it in basically two ways. One is the hematogenous spread or spread via the bloodstream. And the other is lymphatic, or lymphogenous spread, which is spread through the lymphatic vessels. Pancreatic cancer can spread from the pancreas to the lung in both of those mechanisms.

With respect, however, to cancer of the body/tail of the pancreas, that part that drains, it's more commonly spread through the lymphatics than hematogenously. It can be either way, but more commonly spreads that way.

When it spreads hematogenously via the blood system, when a cancer spreads to the lung via the blood system, it is routinely in both lungs. There are multiple lesions, because the bloodstream is carrying tumor cells to multiple areas of the lung, and the lung filters out those tumor cells and causes tumors to develop in both areas. And usually they start in the lower lung, because more blood flow goes to the lower aspect of the lungs than the upper aspect of the lung.

With respect to the bronchoscopic findings of Mrs. Wiley's situation, the important thing is that Dr. Patel in Marion did a bronchoscopy of her because she had

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symptoms of pneumonia and findings on her chest x-ray indicative that there was something going on in her right lung. Nothing in her left lung, but something going on in her right lung. There was a mass appearance in this right hilar area, or the root of the lung.

Dr. Patel did a bronchoscopy of Mrs. Wiley on May 6, 1991, I believe. And

at that time, Dr. Patel looked in her left lung and did not see any tumor; looked in her right lung and did not see any tumor in the bronchus. There was no tumor in the endobronchus, which is the inside of the with bronchus.

What Dr. Patel noted on May 6 of '91 was that the caliber or the dimension of the diameter of those bronchi were very small. They were narrow, if you will. And the reason why they were narrowed, and the reason why she had developed pneumonia is not because there was something that arose inside of the bronchus, but because these enlarged lymph nodes that had drained the pancreatic gland were full of metastatic tumor at this point, and they were impinging upon the airways.

This is what it normally looks like, the bronchus intermedius. Remember I told you right main bronchus comes down, gives off the right upper lobe bronchus, and then the bronchus intermedius. This is what we normally look like, if you have lymph nodes around there, but they're normal in size.

But in Mrs. Wiley's situation and the CT scan of the chest showed that she had enlarged lymph nodes in this area. Ultimately the autopsy talked about the tumor being completely removing or replacing the lymphatic tissue in this area.

Here you see, if you have an enlarged lymph node or lymph nodes around the bronchus intermedius, you're going to have this external compression of the bronchus intermedius. It's going to occlude from without, not within. There was no lesion inside the airway. They didn't see anything.either when Dr. Patel looked down there or subsequently a month later when Dr. Turner looked down there.

So what they saw is the small airways that Dr. Patel noted. Dr. Patel didn't find any evidence of any tumor to even biopsy. He did some washings, which is where you inject fluid down in here and then aspirate it back out to see if you get tumor cells.

When he did that, there were no tumor cells there. So there wasn't anything in the right lung, but there was things on the

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outside of the bronchus that was impinging upon it.

Now, subsequently these tumors in the lymph nodes continued to grow and continued to get worse. And then a month later, on June 6th of '91, when Dr. Turner did her bronchoscopy, she also saw nothing in the left lung. When she advanced the bronchoscope on the right side -- and I have a graphic here to depict this for you.

Now, Dr. Turner did her bronchoscopy on June 6th of '91. There's two different bronchoscopy notes, so their punctuation is a little different. I have a hard time figuring out exactly what she's trying to say with respect to that. But I do know that she noted there was no endobronchial lesion when she did the bronchoscopy on June 6th of '91. In other words, there still wasn't a bronchogenic carcinoma seen in this area.

Here I've depicted a bronchoscope. This is the instrument that you use to look down into the lung. And it's got a little light on the end of it, and you look through

it and you can see the lung.

Well, the bronchus intermedius, which is where this tumor supposedly had arisen, is in direct line of sight of the bronchoscope. It's flexible so you can go up and look up in these areas, but the bronchoscope doesn't even have to flex to see the bronchus intermedius.

So when she looked down there, as well as Dr. Patel looked down there, they saw narrowed airways on this side. And Dr. Turner was not able to advance the bronchoscope past the bronchus intermedius, because she talked about there being mucosal or submucosal mounding. Well, that's because there is impingement on the airway by these lymph nodes enlarged outside of the bronchus. And that's what has caused this occlusion. Not because there's a tumor there, but because there's lymph nodes on the outside of the airway encroaching upon that.

So this extrinsic or compression from the outside is what caused these bronchoscopic findings. The reason why we

know there wasn't an endobronchial tumor is neither Dr. Patel nor Dr. Turner saw an endobronchial tumor.

If there's a tumor here, as I said, you're going to see it. It's not hard to see. Bronchoscopy for tumors in this area is about 98 percent sensitive to detecting a

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cancer in that area. It's not hard to see. It's right in direct line of flight of the bronchoscope.

In addition to that, we know this because of the histopathological studies that were done, the various biopsies and specimens that were taken from the lung.

When Dr. Patel did his bronchoscopy on May 6, '91, he didn't see any tumor, but he aspirated out cells and did not find any cancer cells.

When Dr. Turner did her bronchoscopy a month later, she did a biopsy, and no cancer in that biopsy. There were brushings that were done, which you stick a brush down through the bronchoscope and run it through the airway and brush the airway, the epithelium of the airway, and try to get the

cells out. She did that. There were no cancer cells on those various bronchial brushings.

There were also multiple washings where fluid was injected down here and aspirated out. No cancer cells there either.

If there is a tumor within the bronchus, so-called bronchogenic carcinoma, in a central area. This is a peripheral area of the lung, but the central area of the lung, you're going to see it with a bronchoscope. You're going to be able to either biopsy it or wash it or brush it and be able to get back positive tumor cells. That didn't happen. Two separate bronchoscopies; both within a span of a month, both within a span of seven weeks from the time Mrs. Wiley died.

So therefore I think this is very suggestive, if not diagnostic, of the fact that she did not have a primary endobronchial lesion.

Now, cancers, adenocarcinoma of the lung, can arise not in the bronchus itself. But when that happens, it's exceedingly rare

for that to be in the central bronchi. Less than 5 percent of adenocarcinomas of the lung will arise in a central bronchus.

The bronchi get smaller and smaller and go all the way out to the peripheral. 95 percent of adenocarcinomas of the lung are in the periphery of the lung. They're out here, which can -- you may not be able to detect that with a bronchoscope, but you can frequently send fluid into that area and aspirate it out and get tumor cells anyhow.

So this is both the bronchoscopic findings, as well as the histopathologic findings of the cells and the tissues, none of that diagnosed primary lung cancer in a person who is supposed to have lung cancer

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in the bronchus intermedius. That's just -- that doesn't make sense.

Q Doctor, what is depicted in the bottom third of that chart?

A Yes. This is, I've tried to have the illustrationist depict for you what this would look like in the bronchus. This is a normal bronchus. When you look down with a bronchoscope, you're going to be seeing

this. And here we are in the bronchus intermedius, and here's the takeoff of the right middle lobe bronchus and the right lower lobe bronchus. That's what the normal anatomy should look like.

If you have enlargement of these lymphatic nodes on the outside, you're going to have encroachment or impingement of the bronchus. They will press in on this area, and they will cause the mucosa to press in or, as Dr. Turner described it, mound up. Mounding of these -- and this is not because this is a tumor itself, because the tumor is on the outside pressing in to the bronchus. And that will cause all of the radiographic findings that Mrs. Wiley had, it will cause cough, it will cause the radiographic findings, it will cause the histopathologic findings, all by this phenomena.

So this is what's seen. It looks much different when you look down in the lung and the bronchus intermedius and you see a primary lung cancer. There is a much different appearance. It's a polypoid or polyp kind of lesion that you see in this

area, and that's not what was depicted on either Dr. Patel's or Dr. Turner's bronchoscopies.

Q Doctor, was Mrs. Wiley coughing up blood, was that a symptom of lung cancer?

A Mrs. Wiley did at times from January forward that she had times when she had blood in that which she expectorated. Now, it wasn't classical hemoptysis, the type we see with primary lung cancer.

Q Hemoptysis meaning what?

A Coughing up blood. Actually, it had been attributed to a sinus condition because she had reported that she had bloody mucus from her sinuses. And if you do have sinusitis, you have drainage damage to your lungs, you can cough that back up and you would have bloody mucus in that which you cough up.

Indeed, she had a CT scans of her sinuses which had documented that she had sinusitis in the January of 1991 time frame, as I recall, so that may have been an explanation for it.

But no hemoptysis or no blood in the airway was depicted when she had the

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bronchoscopy, when it was looked directly down in that area. There wasn't hemoptysis or blood flowing from the airway as you would expect to see if someone had an endobronchial cancer in that area.

And indeed, the bronch -- when Mrs. Wiley was admitted to the hospital, Dr. Walker, the orthopedist, who admitted her, noted in his record that she had fairly recently been treated for pneumonia, which is true, she did have pneumonia. The reason she had pneumonia because the airway was blocked off. And her hemoptysis had actually cleared. She wasn't coughing up as much blood. And so her hemoptysis was likely related to the sinus problem as well as infection in the lung.

If you have bronchitis or pneumonitis or pneumonia you will cough up blood as well in that situation. So although the coughing up of blood had cleared some, even if she had continued to cough up blood, that does not mean it was related to primary lung cancer.

Metastatic lesions to the bronchus,

which occur in about 40 percent of metastatic lesions to the lung, 40 percent of those will go to the bronchus. They can result in hemoptysis and cough and shortness of breath and pneumonia as well and that's the explanation of Mrs. Wiley's problems also.

Q Doctor, if someone in this case would testify that pancreatic cancer does not spread to the chest lymph nodes, would that be a correct statement?

A That is blatantly wrong, no. Particularly with cancer of the body/tail of the pancreas. Cancer of the head of the pancreas has to go through two different filters to get to the lung. First it has to go through the lymphatic vessels themselves, they will filter out some of the tumor cells; and then it has to go through the liver because, remember, I said that the drainage goes up through the liver for body/tail pancreas, but cancer of the body -- or of the head of the cancer. Cancer of the body/tail of the pancreas doesn't have to go through that filtering

activity of the liver. And it can go directly to the chest.

So, indeed, cancer of the body/tail of the pancreas estimates are -- studies reflect that between 50 to 60 percent of those will go to the chest via a lymphatic mechanism. So that's not uncommon at all.

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Q Tell us, do pancreatic cancers metastasize to and invade the bronchi?
A Yes, they do.
Q Can you tell us how that happens and how often it happens.
A Yes. About 55 percent of the cancers, particularly of the body/tail of the pancreas, go to the lung. Metastasize to the lung. Of all the pancreatic cancers that go to the lung, about 40 percent of those, four out of ten, will involve the bronchus itself. So pancreatic cancer can spread up into the chest, involve the lymph nodes themselves, or it can actually involve the bronchial wall. And in that situation, you may look down there with a bronchoscope and actually see a tumor. And you may think it's a primary lung cancer. You may biopsy

it, it will say cancer, but even that doesn't mean it's primary lung cancer because you haven't ruled out other sources of that.

So yes, pancreatic cancer does spread to the chest. It spreads to the parenchyma, or the lung tissue, it spreads to the lymph nodes around the bronchi, and it spreads to the bronchial wall itself. And quite frequently. Particularly of the body/tail of the pancreas. Very common.

Q I'm not sure you mentioned this, if you did I apologize, but did you find in the records that a sputum cytology was performed?
A Yes, I believe about five or six days before Mrs. Wiley expired they were still trying to document or diagnose the source of her cancer, so a sputum cytology was done.

And that's a test in which you have an individual cough up phlegm and then you take a look at the cells in that, underneath a microscope, and look to see whether or not there are any cancer cells in that.

And Mrs. Wiley did not have any cancer cells in that cytology that was coughed up.

Not because she didn't have cancer in the chest. She had cancer in the chest. But she didn't have it within the bronchus.

In an individual who is that close to death, and has -- indeed does have a primary lung cancer that is invading or arising out of the bronchus, you're going to have cells that are shed into the airway. I mean, you cough up, those cells are going to reveal malignancy. And Mrs. Wiley, even within the last week of her life had a cytology done, and it did not reveal any cells that were indicative of any cancer.

Q Okay, Doctor, I'm going to ask you to resume your seat here for just a minute or two.

Did you, after reviewing Mrs. Wiley's

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medical records, did you find -- well, let me withdraw. Let me ask you a couple of questions, first of all, about adenocarcinoma in general for a moment.

Is adenocarcinoma a type of cancer that can originate in most of the organs in the body?

A Yes. In a great many of them, yes.

Q And how rare or common is it to find

adenocarcinoma that originates in the bronchus?

A It is rare that it originates, particularly in a central bronchus. As I mentioned, less than 5 percent of the adenocarcinomas of the lung originate in any sort of central or primary bronchus. That's rare.

Q If you have an adenocarcinoma in the lung, and that's all you know, is it more or less likely to be a metastasis, one that's spread to the lung or originated in the lunge?

A It's much more likely to be a metastasis. Even in active smoking people it's much more likely to be a metastasis.

Q We've been talking a lot about metastatic tumors. Can a metastatic cancer, one that has spread to an organ from someplace else, also metastasize itself and spread someplace else?

A Yes. That's a so-called tertiary metastasis, where a cancer spreads from another organ to the lung and then metastasizes from the lung to other tissues.

In this particular situation, that's how the cancer of the skin on Mrs. Wiley's

chest area and likely on her scalp as well and the tumor -- were spread that way, so-called tertiary or metastasis of a metastasis.

And that's also how she got cancer in multiple bones in the body, was a metastasis from the lung from something that had already metastasized from the pancreas to the lung.

Q From your review of the literature, is adenocarcinoma of the lung closely associated with cigarette smoking?

A Well, all of the cell types of cancer are associated with active smoking; not with environmental tobacco smoke but with active smoking.

Of the four cell types, the one that is least closely associated to adenocarcinoma -- to smoking is adenocarcinoma. In other words, there's less of a statistical link between adenocarcinoma and active smoking than there is, for example, with oat cell carcinoma or squamous cell carcinoma or even large cell undifferentiated carcinoma.

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Q Doctor, from your review of Mrs. Wiley's medical records, did you derive any significance from her total clinical course during the time she was at Ball Memorial in May and June 1991? I'm talking about how rapidly she deteriorated.

A Yes. Mrs. Wiley died within, oh, less than a month from her hospitalization at Ball Hospital. And this is quite standard or very typical for primary pancreatic cancer with metastasis. This is one of the most dread and deadly diseases of all the cancers that we know.

And the fact that she expired that quickly is much more typical of primary pancreatic cancer than primary lung cancer. The doubling time, or the rate -- the rate at which a cancer grows is usually tied to the type of cancer. And primary lung cancer does not double, particularly adenocarcinoma of the lung, which is a less rapidly growing cancer than is oat cell or small cell carcinoma of the lung.

The doubling time of primary lung cancer is much longer, takes much longer for

the tumor to double in size than it does for primary pancreatic cancer.

And primary pancreatic cancer can double quite quickly so the fact that Mrs. Wiley died within a few weeks from the time that she was admitted to the hospital there and went rapidly downhill with respect to her course is entirely consistent and very typical of primary pancreatic cancer and would not be expected with primary lung cancer.

Less than 5 percent of people with primary pancreatic cancer live a year. And, indeed, people who have primary pancreatic cancer of the body/tail, the average duration of life span is about two months. Whereas with primary lung cancer, about 40 percent of the people will live a year. And about 15 percent of the people will live five years. Less than one-half of 1 percent of people with primary pancreatic cancer live five years.

So I think the clinical course, the way in which Mrs. Wiley's course was so rapidly downhill, is very suggestive of primary

pancreatic cancer and much less so for primary lung cancer.

In addition to that, there's another aspect that I think is at least suggestive of primary pancreatic cancer with respect to her course, and I alluded to that earlier, in that she had radiation treatment

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performed at Ball Hospital to her back, to where they thought her back pain was coming from. And that's that L2 vertebrae in her lumbar spine. That didn't help. She continued to have severe debilitating back pain.

And the reason why is that the back pain was not emanating from the vertebrae itself. The vertebral body was intact and did not have cancer in that. A bone scan was done and did not reveal cancer in the vertebral body. And the spinus process, the posterior part of the spine, was already completely destroyed.

But the reason why Mrs. Wiley continued to have back pain that was unresponsive to radiation therapy is because the cancer of the pancreas had spread to include the

peripancreatic nerves that I talked about, those splenic nerves, and that severe pain will not respond to radiation treatment so there's another aspect of her clinical course that was suggestive to me that she had primary pancreatic cancer rather than primary lung cancer.

Q Doctor, did you prepare a chart that compares the frequency of pancreatic cancer to other cancers?

A Yes, I did.

MR. MOTLEY: Your Honor, could I mark those other two charts, please?

MR. WAGNER: Sure, you can mark them all at the break, Mr. Motley.

MR. MOTLEY: Thank you.

Q Is this the chart?

A Yes, it is.

Q Can you see that?

A Yes, I can.

Q Can you explain that the jury, please?

A Yes. These are cancer death statistics, mortality statistics estimates in the United States in 1996. They're estimates because we don't really have a precise count of what

causes somebody to die. But these are estimates.

And I wanted to put in some sort of context the frequency of pancreatic cancer related to other types of cancer, and specifically with respect to the issues that are germane to Mrs. Wiley's case. In other words, could it be lung cancer in a nonsmoker or could it be breast cancer.

And so the chart, as I've laid it out, shows that it's estimated that in the United States in 1996 -- the data are not much different than 1991; the numbers are a little greater because population has increased but they're essentially the same.

All cancers in the United States, it's

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estimated that about 510,000 people die from cancer in the United States each year. Lung cancer in nonsmokers, it's estimated that about 21,000 people die of primary lung cancer. We're talking about cancer that arises within the lung, not metastatic, but primary lung cancer, nonsmokers, 21,000 a year.

Pancreatic cancer, it's estimated about

27,800 people die of primary pancreatic cancer each year. And breast cancer, 55,000 die a year.

Indeed, pancreatic cancer is the fourth leading cause of cancer death in the United States. And so it is not an unusual situation. It's a very common one. And it's one which is, as I mentioned earlier, not only one of the most dread diseases but also the most deadly diseases. Rarely is there a survival for somebody with primary pancreatic cancer.

So it's a common type of a condition. Unfortunately, we don't know causes it, we don't know how to diagnose it, we don't know how to take care of it, so that's the reason why it doesn't get as much publicity I think as some of the other cancers.

Q Doctor, can you briefly sum up for us now what your conclusions were based on Mrs. Wiley's clinical findings?

A Based on her clinical findings as well as taking a look at the medical literature and the relative spread of her cancer from one organ to another and what the literature

says about that, and my conclusion was that, to a level of greater than 99 percent likelihood, Mrs. Wiley died of primary pancreatic cancer with extensive widespread metastasis to the lymph nodes in her chest, to her right lung extensively, to multiple bones in her body including her skull, her vertebra, both femurs, or thigh bones, her left tibia, and also involving her left kidney, and also involving the skin in a couple of areas. So I felt it was -- this is a textbook case of primary pancreatic cancer involving the body or tail of the pancreas with metastatic spread to the chest and the lung.

Q Doctor, you've reviewed the autopsy report that was performed on Mrs. Wiley?

A Yes, I have.

Q Can you tell us what significant matters you found in the autopsy report?

A Well, there were a myriad of significant findings. The first is that the autopsy did not find any endobronchial lesion in the lung. Here again, we talked about that with respect to the x-rays and the bronchoscopy

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and the cell studies. There was no tumor found arising within the bronchus itself. So I think that's significant.

The autopsy did find tumor completely replacing the lymphatic nodes in the chest. Both in the mediastinal area, as well as in the right side of the chest. So that is significant.

There certainly was cancer, adenocarcinoma found in the right lung in a variety of areas. But it was not within the bronchus itself and it was not in any way diagnostic of primary adenocarcinoma of the lung.

In addition, other findings that I felt were significant were the fact that the pancreatic gland itself had cancer in it. Now, initially, when I took a look at the case, the autopsy report said that there was no cancer within the pancreatic gland itself. But I still thought that it was quite likely that pancreatic cancer needed to be very high on the differential because there was cancer in the peripancreatic lymph node. That's the initial autopsy report,

said there's no cancer in the pancreatic gland but there's cancer in the peripancreatic lymph node.

Well, it's unusual for there to be cancer in the peripancreatic lymph node without it coming from the pancreas, it's quite rare. The reason why I wasn't put off by the fact there wasn't cancer seen in the autopsy report initially within the pancreas because of what we call a sampling error. You have to take multiple slices through the pancreas in order to get the tumor. And if the pancreatic tumor is small, which it may well be, you may not depict it.

So even though it was not noted on the autopsy report, I still felt that it was -- it was of concern to me that this was primary pancreatic cancer because everything else stacked up, and there was cancer in the pancreatic -- peripancreatic lymph nodes.

Subsequently I found out that there was a mistake in the autopsy report and that there really was cancer in the pancreas itself. So that was sort of the coup de grace, if you will, that sort of showed me

that there was cancer arising within the pancreatic gland.

And then subsequently, other pathologists, including Drs. Bennett and Porter, have taken a look at the specimens there and have identified that this was a pancreatic cancer that arose out of the duct

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cells.
Duct cell adenocarcinoma is a cancer which is very typical of pancreatic cancer; indeed, 80 to 85 percent of the pancreatic cancer is duct cell carcinoma. So the finding of cancer within the pancreas itself, and the peripancreatic lymph node and in all the lymph vessels leading from the pancreas up into the chest into the right lung, all of that was very consistent and, indeed, quite typical of primary pancreatic cancer with extensive metastasis to the chest and right lung.
In addition, there was a finding on the autopsy of what's called pancreatitis in the pancreatic gland. Pancreatitis is an inflammation of the pancreatic gland itself. And that was significant because, although

we don't know what causes pancreatic cancer, one of the risk factors that's thought to be important is a condition known as pancreatitis, inflammation of the pancreatic gland.
So I felt that was significant because it may have been a precursor for why Mrs. Wiley got primary pancreatic cancer. We don't really know what causes it but in that particular situation there is something that could have suggested a cause of that.
In addition, we find oftentimes in people who do have primary pancreatic tumors they will have pancreatitis, or this inflammation around the tumor itself, because it blocks off that pancreatic duct that I showed there, and there will be a backup of these enzymes and will lead to pancreatitis that way. So I felt that that was a significant finding as well.

Q Doctor, from your review of the autopsy report, was there any evidence of any changes in the bronchi or the lung parenchyma from tobacco smoke?

A No, there was not. And the autopsy did not

reveal findings that would indicate that there had been intense tobacco smoke exposure.
One of those findings is a condition known as anthracosis, and this is a blackened -- blackening of pigment of the lung. And in people who have had extensive exposure to air-borne contaminants, such as active smokers or people who have been exposed to intense kinds of carbonaceous material in the environment, coal minors, et cetera, there will be this anthracotic pigmentation of the lung. That was not depicted in Mrs. Wiley's lung.
Everybody has a little anthracosis because we all breathe in some exhaust

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fumes, automobile fumes, et cetera, so we will have some darkening of the pigment of the lung but there was not any significant amount of anthracosis.

And indeed, if Mrs. Wiley had had substantial levels of exposure to environmental tobacco smoke, for 17 years and nine months, I would have expected that there might well have been some increased

anthracosis there.

In addition, tobacco smoke can cause other non-cancerous changes in the lung known as chronic bronchitis and emphysema. And there were not histopathological changes of chronic bronchitis or emphysema in Mrs. Wiley's lung, so this would also be an indication that there was not a substantial amount of intense exposure to environmental tobacco smoke.

There was no notation of any so-called smoker macrophage. Remember, I talked about those scavenger cells that go around and scavenger up various types of contaminants that have come in the air that we breathe.

Mrs. Wiley did not have smoker's macrophages. There were not an increased level of macrophages in the lung. So I think those were some of the other reasons why there was not indication in the lungs this was indicative of any level of intense exposure to environmental tobacco smoke.

The other thing that's significant is that cancer of the lung does not begin de novo, just out of the blue, with one cell

becoming cancerous. There is a process that develops. And the cells will become overactive or hyperactive or proliferative and they will grow more rapidly and then they will advance to a stage that's known as dysplasia, where the cells will look abnormal, and then they will develop into a stage that's known as carcinoma in situ, which is the type of cancer which hasn't really invaded yet. And then ultimately cancer.

Mrs. Wiley's lung did not have those changes that you see in lung epithelium that are typical of this multi-staged genesis of cancer in the lung.

Q If Mrs. Wiley had had a primary lung cancer, one that started in her lung, are the adrenal glands, the liver and the other lung three of the organs to which primary lung cancer will typically spread?

A Well, yes, there are five organs that primary lung cancer spreads to: The other lung, the liver, the adrenal gland, the brain, and bone. In that order.

Mrs. Wiley did not have cancer

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documented in the other lung, her left lung was clear; she did not have it documented in the liver; she did not have it documented in the adrenal glands; and she did not have it documented in the brain.

She did have it documented in the bone but, remember, we talked about this so-called metastasis of metastasis where a spread of a primary from outside the lung, goes to the lung and then spreads to another organ. So of the five most common sites for primary lung cancer, she only had it in one.

Q All right. Doctor, there's been some testimony from time to time that the cancer in Mrs. Wiley's pancreas was not the primary site of her cancer because the tumor in her pancreas was relatively small compared to the tumor in the lung.

Can you tell us whether or not the size of the cancer in Mrs. Wiley's pancreas is indicative of the primary site of her cancer?

A Well, no. And for one, we don't know what the size of the cancer was in Mrs. Wiley's pancreas. The autopsy was not performed in

a fashion that we would be able to tell that. It may have been much more extensive than what we even know.

We do know there was pancreatic cancer. And with pancreatic cancer, and also with breast cancer, the size of the primary tumor does not necessarily indicate whether or not there's going to be a metastasis. Indeed, one study of 154 cases of primary pancreatic cancer, particularly of the body/tail, indicated that of tumors that are less than 2 centimeters in size, less than an inch, or even microscopic, 64 percent of those had already spread to another organ.

So the fact that the tumor is smaller in the pancreas than the lung has no real relevance with respect to where the cancer arose.

If you think about it, the pancreas itself is a gland that's only five inches or six inches long and a couple inches wide and an inch thick, so even if the whole pancreas gland had been eaten up by primary pancreatic cancer, it couldn't arise to the level of size of a lung cancer. A cancer in

the lung from a secondary metastasis.

So I don't think the size of the cancer can be used to tell whether or not the cancer arose in the pancreas or the lung.

MR. WAGNER: Judge, I've got another 15 or 20 minutes, then we'll be finish, do you want to break? Keep going?

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THE COURT: Let's finish with this witness.

MR. WAGNER: Keep going? Thank you, Judge.

Q Is there anything about the spread patterns of pancreatic cancer and lung cancer which are significant to you with respect to your opinion that Mrs. Wiley had a primary pancreatic cancer?

A Yes. This is a key aspect, obviously. I already mentioned where the primary lung cancer goes to, those five organs, and she did not have it in the first four of those five, only in bone.

It's exceedingly unusual for a primary lung cancer to spread to the pancreas itself. There are different studies, large autopsy series, anyplace from 2 to 5 to 7

percent of primary lung cancer will spread to the pancreas. Indeed, in large autopsy series, the pancreas is the 14th or 15th organ in list of priority that primary lung cancer goes to. So it's way down the list. And this is particularly true when one talks about adenocarcinoma of the lung.

Oat cell carcinoma of the lung is a different matter. Of all the cancer of the lung that goes to the pancreas, which is, again, less than 10 percent, in most studies, 70 percent of those are oat cell carcinoma. A different cell type, which Mrs. Wiley didn't have.

Adenocarcinoma is much less likely to spread to the lung. Anyplace from a range of 2 percent to 5 percent of adenocarcinoma spreads from the lung to the pancreas.

Whereas, it's exactly the opposite with pancreatic cancer going to the lung. Particularly here again, this body/tail of the pancreas versus the head of the pancreas. Head of the pancreas will first go to the liver and then secondarily to the lung and the liver may filter out all the

cancer cells and it not get there. But with cancer of the body/tail of the pancreas, there is this direct conduit from these peripancreatic lymph nodes up into the chest and spread to the lung in that fashion.

And so the estimates are anyplace between 50 to 60 to 70 percent of pancreatic cancer of the tail or body of the pancreas goes to the lung, whereas it's less than 10 percent of the adenocarcinoma of the chest going to -- or the lung going to the pancreas.

Also, the fact that there was peripancreatic lymph node involvement is significant. One large autopsy series shows that only 3 percent of primary lung cancer

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will involve a peripancreatic lymph node.
So it's much, much more likely, tenfold more likely that if you have cancer in the pancreas and in the lung, where does it start? It started in the pancreas, at least ten more times likely than it started in the lung.
And this applies even to active smoking people. There's been a study by Casseary of

ten cases in which pancreatic cancer masqueraded or mimicked primary lung cancer, in a situation just such as this. And these ten people happened to all be active smokers. But even in those individuals, it was, the likelihood of finding a -- if you find primary cancer -- if you find adenocarcinoma in the pancreas and in the lung, it's much, much more likely to be cancer that arose in the pancreas as opposed to cancer that arose in the lung.

Q Let me see if I can just sort of sum up here on this some of the things you told us.
If you have a primary adenocarcinoma of the pancreas in the body or tail, what does the literature teach us as to how often it metastasizes to the lung?

A 40 to 60 percent, and some people, Rosenblatt thinks it might even be higher than that.

Q And if you have a primary lung cancer, what does the literature tell you as to how often it metastasizes to the pancreas?

A Well, if we're talking adenocarcinoma --

Q All right, so let me add that. Adeno. So

it would be primary adeno lung cancer; right?

A Yes. If we talk about all lung cancers, from the lung to the pancreas, 9 percent, 10 percent, something in that realm. Some have much less than that. But of primary adenocarcinomas of the lung, the rate is much less, about 5 percent.
One study there were 158 primary adenocarcinomas of the lung, five of those went to the pancreas. These are autopsy cases so we know whether or not there was cancer in the pancreas.

Q Okay. So primary adenocarcinoma of the pancreas in the body or tail metastasize to the lung 40 to 60 percent of the time; primary adenocarcinoma -- primary lung cancer with adenocarcinoma metastasizes to the pancreas about 5 percent of the time; is that right?

A Yes. And then if you add the peripancreatic lymph node there it's about 3 percent of the time, so the odds are much, much greater that it's a primary pancreatic cancer in Mrs. Wiley's case just based merely on the

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spread or distribution pattern of the tumor.
Q Did you derive any significance as to the location of the primary site of Mrs. Wiley's cancer from the fact that cancer was found only in her right lung?
A Well, yes. As I mentioned, cancer of the pancreas can spread to the lung via two mechanisms: One, the hematogenous or via the blood stream; or two, the lymphatic system. I believe it's more likely in her situation that it came via the lymphatic system.

And studies have shown that, both with respect to lymphatic and hematogenous spread of cancers from the abdomen to the lung, even pancreas and other organs, it's more common to have the tumor in the right lung than the left lung.

And the reason is that there are -- at least the conjectured reason is, that there's much more lung tissue in the right chest than there is in the left chest. The heart occupies what would essentially have been one of the lobes of the lung on the left side. So it's more likely for tumor to

be present in the right lung than the left lung if only one of the two lungs is involved.

Now, frequently, with hematogenous spread both lungs are involved, usually the lower lobes. Mrs. Wiley didn't have both lungs involved and she had right upper and right middle lobe involved. So I think this speaks to the fact, in addition to the autopsy study, which shows this extensive replacement of lymph nodes in the chest by tumor that this was spread lymphatically, although it could also have been spread in a hematogenous fashion, one doesn't rule out the other.

And studies have shown that with respect to pancreatic cancer, if you take all the pancreatic cancers that spread to the lung, of which there are sizable number of those, and the ones that either have it in the right lung or the left lung, 70 percent of them will be in the right lung and 30 percent of them will be in the left lung.

Then if you take the ones that involve

the lymph nodes in the chest, of which there are right lymph nodes and left lymph nodes, the lymphatic vessels, 75 percent of those involve the right chest as opposed to the left chest.

So this fact that Mrs. Wiley was affected with cancer only in her right chest

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and right lung, to me, is entirely consistent with what we know about the natural history of pancreatic cancer as it spreads.

Q Couple more questions and we'll be finished, Doctor.

Is there any aspect of Mrs. Wiley's case -- clinical, radiological, autopsy, or anything else -- inconsistent with your opinion that Mrs. Wiley had primary pancreatic cancer?

A No. As I mentioned earlier, Mrs. Wiley's case is a classical textbook case of primary pancreatic cancer of the body or tail of the pancreas masquerading as primary lung cancer.

And this is documented throughout the medical literature all the way back to 1929,

all the way forward. I found multiple citations where this occurred. So her case is very consistent, classical for primary pancreatic cancer, and would not be at all typical of primary lung cancer.

Q Has Dr. Songer referred patients to you from time to time?

A Yes, he has.

Q What for?

A Dr. Songer is a cancer specialist and he has referred patients to me, he's consulted with me and referred me patients that have to do with what the cause of the cancer is. I don't treat the patients for cancer. But for example, I remember a lady that had breast cancer that worked here at the Westinghouse facility and there was a concern as to whether or not the breast cancer was related to exposures to PCBs in the workplace there and Dr. Songer asked if I would evaluate that individual to see, not whether or not she had cancer, but to find out what the etiology or the cause of that cancer was.

Q And did Dr. Songer telephone you some months

ago and ask you to become involved in this case?

A Yes. Dr. Songer called me and he was not aware of the fact that hid already been retained as an expert for the defense in this case and we had a telephone conversation, I told Dr. Songer I wouldn't be able to assist him in this case because I obviously felt like that would be a conflict of interest with this particular case.

MR. WAGNER: That's all I have, Your Honor.

THE COURT: Thank you, Counselor. We'll take the noon break, ladies and gentlemen. We will start again at 1:15.

(Standard admonition)

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MR. CASSELL: All rise.
THE COURT: You may step down.
(A lunch recess was taken.)

MR. CASSELL: All rise.
THE COURT: Be seated. Back on the record, ready for cross-examination. Dr. Smith.
Just have a seat, Doctor. Would you

state your name again for the record.
THE WITNESS: Steven Richard Smith.
THE COURT: You recognize you're still under oath, Doctor?
THE WITNESS: Yes, I do.
THE COURT: Mr. Motley.
MR. MOTLEY: Good afternoon, ladies and gentlemen, Your Honor.

CROSS-EXAMINATION

BY MR. MOTLEY:

Q Dr. Smith, my name is Ron Motley. I'm from South Carolina and I talk funny and I talk slow, and I would ask you to listen slow and try to respond slow if we can. Okay? Please.

A Yes, I'll try to do that.

Q Dr. Smith, you spoke at length about the treatment of the cancer of Mildred Wiley. Correct?

A I don't know that I spoke too much about the treatment.

Q You didn't say too much. I said you spoke at length about the treatment. You were talking about the tests she had received and all of that, didn't you?

A Well, that's the diagnosis. That's not the treatment. I would make a distinction there.

Q All right. The diagnosis and treatment of the cancer, you spoke about at length; correct?

A Yes, I did.

Q All right. Now the fact of the matter is, you don't treat people for cancer, do you?

A No, I do not.

Q And you talked a lot about the -- her experience in being diagnosed and treated in the hospital. You remember that?

A Yes, I did.

Q The fact of the matter is, you don't even admit patients and treat them in the hospital for any disease, do you?

A Rarely, no, I do not.

Q But what you do do is get involved in legal matters a lot; right?

A I don't know what your definition of a lot is. My practice, my specialty, is one which does revolve around a fair amount of legal issues in some situations but --

Q How about 98 percent of your practice is

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involved with work-related injuries and illnesses, and that that causes you to be involved in the court system, including worker's comp. a lot of time; correct?

A I'm not in the court system very much at all. Certainly not 98 percent of the time.

Q Okay.

A Most of the times when I'm involved with treating an occupational injury, there's no litigation going on whatsoever.

Q Well, do you remember the case of Eva Ficklin?

A Yes, I remember the case of Eva Ficklin.

Q "Essentially 98 percent of my practice has to do with work-related illness and injury, and so, therefore, I'm dealing with worker's compensation-related matters on a daily basis."

A That's true.

Q That's true?

A But that's not litigation.

Q All right. And 85 percent to 90 percent of that time is for the employer, is it not, or defendant?

A Your question is unclear to me. You'll have

to restate it.

Q Well, when you're involved in litigation matters, be they worker's comp or otherwise, 85 to 90 percent of that time you're being paid by the employer or the defendant.

A Well, actually, here's the scenario: Of the cases that I'm involved with, with respect to worker's compensation or occupational disease, 80 to 85 percent of the time I'm actually involved on the side of the claimant or plaintiff. Most of the patients that I see I am actually acting as their advocate. My opinions are such that they are opinions that are rendered in favor of the patient.

Now, of cases that go to litigation, the numbers are different. And I don't know exactly what they are. But many of the cases that I'm involved with, indeed most of the cases that I'm involved with, I'm actually treating the patient and then -- treating the patient on the basis of the patient's illness or injury. Of the cases that go to litigation, a significant number, the majority, maybe 80 to 85 percent of

those, when I testify in court, I'm testifying on behalf of the defendant.

Q Okay. That's my point, sir. Do you remember testifying in the case of Anita Jane Gay vs. GenCorp. Automotive in 1997?

A Yes, I do remember that.

Q And you told that court that, "The majority

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of the cases that I do are cases in which I am retained by the defense as opposed to the plaintiff -- I don't have an exact number on that. I would say that in the last ten, most of my work has been on the plaintiff's side. But if I were to estimate, the last ten days, I would say it was probably 85 percent defendant and 15 percent plaintiff." Correct?

A Of cases that go to litigation. Of the total number of cases I'm involved with, the ratio is exactly the opposite. About 80 to 85 percent of the time I'm working on behalf of the patient.

Q Sir, isn't it true, Dr. Smith, that your professed special professional interest -- you have a special professional interest, don't you?

A Yes, I do. And --

MR. WAGNER: Excuse me, can I see that?

MR. MOTLEY: It's a calendar.

MR. WAGNER: I'm sorry.

MR. MOTLEY: I'm not going to depress anybody and tell them how long we've been here, Judge. I'm talking about something that happened earlier.

Q Now, you can't see this, but you got to trust me on this. August the 19th of 1997 was a very important day in your life, wasn't it?

A I don't know that I would say it was a very important day. It was the day that my services were retained in this matter.

Q Okay.

A There have been many more important days than that in my life.

Q I didn't say it was the most important. I said a -- an important day. And wouldn't it be fair to say, sir, that by the time this case is over with, you will have earned about $75,000?

A I don't know what the exact amount is. I

think in my direct testimony I estimated that I have worked on this case between 220 to 250 hours at a rate of $240 an hour. So whatever that calculates out to be.

Q That ain't the rate you're here today on, is it?

A No. My testimony fee is different than that.

Q That's $500 an hour?

A It's $3,500 a day or $500 an hour if I go less than a full day.

Q And, Doctor, your interest -- you told the jury, you had a professional interest and a lot of your practice dealt with respiratory tract cancer, lung disease, didn't you?

A I said a lot of my practice deals, and I

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have a special interest in occupational and environmental pulmonary disease, yes.

MR. MOTLEY: May I approach with this, Your Honor?

THE COURT: Sure.

MR. MOTLEY: Your Honor, we move the admission of the resume that Dr. Smith gave us at his deposition in this case.

THE COURT: Any objection,

Mr. Wagner?

MR. WAGNER: It's hearsay, Your Honor.

THE COURT: You want to ask a couple of foundational questions, Counselor?

MR. MOTLEY: Yes.

BY MR. MOTLEY:

Q Is that your CV that you gave us and we attached to your deposition in this case?

A It is the CV I gave, yes.

Q Okay. And that's the CV you use in your consultant service?

A Yes.

MR. MOTLEY: We move its admission, Your Honor.

THE COURT: Any other objection, Counselor?

MR. WAGNER: No other objection. Same objection as before, Your Honor.

THE COURT: 114 will be admitted.

(Plaintiffs' Exhibit(s) 114 received in evidence.)

Q Doctor, would you look at the first page, and you'll see that this curriculum vitae or resume was prepared on October 1st of '97?

A Yes, I see that.

Q And that's a little, let's see here, one, two, three, four, five, six, seven, a little more than seven weeks after you got retained in this case by Mr. Wagner; right?

A Yes.

Q And you have a section in here that talks -- you haven't published anything, have you, on lung cancer or pancreatic cancer in peer-reviewed literature?

A No. I'm not an academician. I do not publish or research. I'm a clinical doctor who treats patients.

Q Well, you don't treat any patients for cancer, do you?

A No. I diagnose patients with cancer and refer them to specialists who do treat them, but I don't treat patients.

Q Refer them to someone else who does treatment; correct?

A Correct.

MR. MOTLEY: Ladies and gentlemen, look on page 8, if you might, please.

Q And you see you got what you call special professional interests, and that's what you

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told us about. If you look down about halfway down, you find occupational- and environmental-induced pulmonary diseases, disorders; including asthma, other airways disorders, pneumoconiosis. That's a fancy word for dust diseases of the lung, right, like silicosis?

A That is correct.

Q Hypersensitivity, pneumonitis, toxic lung injury and respiratory tract neoplasms. And that respiratory tract neoplasms can be mean lung cancer; right?

A That is one form of respiratory tract neoplasm.

Q When you use the word "induced," you mean caused, don't you?

A Yes, generally that's what I'm talking about. It may not be an exact translation but, yes, the etiology of the problem being something that is related to an environmental exposure.

Q Well, you're not one of these doctors who come here and told the jury that cigarette smoke has never caused a lung cancer in a human being, are you?

A Well --

Q Can you answer that yes or no?

A I can answer it yes or no, yes.

Q Okay. Well, you are not one who does not believe that cigarette smoking has not induced or caused lung cancer in anybody, are you?

A No, I am not one of those.

Q Okay. Now, your interest in occupational respiratory tract cancer and all of that, you've had a lot of experience doing that?

A Yes, I have.

Q That's been a special interest for some time?

A Well, the nature of my practice is that, ever since I began practicing occupational medicine, it was an interest area for me. As a matter of fact, originally, I was thinking about going into the area of pulmonology and then took a different track in my career. So, yes, I have had an interest in occupational environmental lung disease for some time.

Q So the answer to my question is, you've had an interest in that going back at least a

decade?

A More than a decade, yes.

Q More than a decade.

Dr. Smith --

A I should point out that my interest in that area is -- my practice is becoming more and more that of late. I used to spend a fair

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amount of my time treating occupational injuries, and I don't spend nearly as much time doing that now because my interest has been focused more in the area of occupational diseases, as I mentioned to Mr. Wagner. And so, therefore, since occupational lung disease and environmental lung disease is a frequent component of that, my practice has been evolving into that area much more over the last several years.

Q Over the last several years, say, since, what, '94, '95, you've become more interested in lung disease?

A I think in occupational and environmental lung disease, I have, yes.

Q Okay. In fact, Doctor, your bread and butter of your practice was back injuries,

wasn't it?

A I'm not sure I understand what you mean by bread and butter.

Q You don't? Okay. Well, let me ask you this: Dr. Smith, do you recall testifying in the case of Marcell Dean Elmore vs. Arvin Industries in June of 1996? You remember that?

A Yes, I do.

Q And you used the word "bread and butter" in that case, didn't you?

A I might have. But I'm not --

Q So you --

A -- I'm not sure how you characterize bread and butter.

Q You know what bread and butter means, don't you?

A My definition of bread and butter means that it's something that comprises a substantial amount of what one is engaging themselves in and, indeed, occupational back pain is the most common of all occupational entities. So as a board certified specialist in occupational medicine, I've obviously spent a fair amount of my time in occupational

back pain.

Q "The bread and butter of our practice as of a year and a half ago is musculoskeletal medicine." As of June 17, 1996. Those are your words, that your bread and butter was back cases; right?

A No. That's -- I believe -- I couldn't hear very well because you had something in your mouth, but I think you read it.

Q Normally I do. I chew on my tongue, frequently.

A I think you said our practice, and the operative word there is "our practice." I'm the director of a program that employs ten full-time physicians, and the bread and butter of our practice at Community Hospital

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is, indeed, musculoskeletal. My --
Q Since --
MR. WAGNER: Wait a minute, just a second. Let the doctor complete his answer, please.
THE COURT: Did you finish your answer?
THE WITNESS: No, I did not.
THE COURT: Go ahead, finish it.

A As a director of that program, I have responsibilities for what goes on in that program, and there are ten full-time physicians practicing in that area and about 20 to 25 part-time physicians. And whenever you have an occupational medicine practice, the bread and butter of that is going to be musculoskeletal medicine.
However, I don't spend my time seeing people who come in with routine back injuries. My specialty is occupational illness and areas that arise out of that. It's not to say that I don't have expertise in back pain because I do. But it's not the only or sole focus of my practice.
Q Well, do you know how many times you've testified in a court of law about back injuries, sir?
A Not very often.
Q Not very often.
A At least by my estimation of what very often is. You may have a different definition.
Q You're not one of these fellows who has testified over a thousand times, I guess?
A No, I have not.

Q Now, Dr. Smith, you have published and made papers public about back pain, haven't you?
A Yes, I have.
Q In fact, if you look, folks, at the exhibit, in 1994, you gave a paper on the Most Common Worker's Comp. Injury, Occupational Back Pain, on page 5; right?
A Let me find that.
Q Page 5. I believe it's on page 5. I ask you to look on page --
A There actually is.
Q Yes, page 5.
A Yes. Yes, I did make a presentation on that, because it is the most common occupational condition.
Q Okay. And in 1994, do you know who you gave that on behalf of?
A I gave it on behalf of myself. I gave it to people who attended a seminar; the annual worker's compensation conference put on by the Indiana State Chamber of Commerce, but I gave it on behalf of myself and the Community Hospitals Occupational and Environmental Health Program.
Q Do you know Mr. Reynolds who is sitting in

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this courtroom?
A No, I'm not sure I do.
Q Well, you know the law firm of Locke Reynolds, don't you?
A Yes, I do know that firm.
Q Do you know that law firm represents a defendant in this case?
A I think I've seen that name. I have not interacted with anybody from Locke Reynolds in this case.
Q Well, do you see anywhere on your 1994, on page 5, where you mention Locke Reynolds?
A You might have to direct me to it, on page --
Q The one we were just looking at, page 5 at the bottom, 1994.
A Correct.
Q Do you mention them there?
A I don't see that mentioned there.
Q Okay. And if you would, look over on -- that's 1994 -- on page --
MR. WAGNER: 6.
Q -- 7.
A Page 7? I have that.
Q All right. On page 6, you do mention Locke

Reynolds Boyd & Weisell, is it?
A You want me on page 6 now.
Q I'm sorry, I gave you the wrong page. Mr. Wagner was helping me out.
MR. WAGNER: Always glad to help out, Counsel.
MR. MOTLEY: I'm always glad to accept free advice, Your Honor.
A I'm sorry, I forgot your question.
Q Page 6. Mr. Wagner and I were having a little tete-a-tete over here, so -- 1994 you do mention Locke Reynolds.
A Well, it wouldn't surprise me because --
Q I just asked you, do you or don't you?
A I'm looking for that on page --
Q Top of the page, 1994.
A Yes, I see Locke Reynolds listed there.
Q What were you doing there with Locke Reynolds? Were you at the Indiana State Chamber of Commerce or with Locke Reynolds or both?
A This was a conference put on by the Indiana State Chamber of Commerce in which my understanding is they employed the law firm of Locke Reynolds to moderate the session,

and attorneys from Locke Reynolds contacted me and asked me if I would come and speak about the Americans With Disabilities Act and so I did so.
Q All right. Now, Doctor, let me ask you a question -- let's get back here. So now you were hired to look at Mildred Wiley's case

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that you understood involved lung cancer and cigarette smoking; right?

A That was the way the case was presented to me, yes.

Q Right.

A Not active smoking, but passive exposure to ETS.

Q Right.

A Counselor, do you want this back?

Q No, sir, you can hold that one because we're going to take a look at it in a second.

Can you tell the ladies and gentlemen of the jury if that's a resume or CV that existed before this one of October of '97?

A Yes, this one is dated January 1, 1996.

MR. MOTLEY: Okay. Now, I would ask you, sir, to look, please, at page 7, and I would ask the Court to admit that and

let the jury look at it.

THE COURT: Any objection?

MR. WAGNER: Same objection as before. It's hearsay.

THE COURT: Noted, overruled. 115 will be admitted.

(Plaintiffs' Exhibit(s) 115 received in evidence.)

Q Now, if you would, sir, please look at page 7 of the 1996 resume.

A I have that.

Q You have that? Would you look between, midway between "efficient utilization" and "determination of medical" -- see that?

A I have that area, yes.

Q And between "efficient utilization" and "determination of medical suitability" is a blank; right?

A There's a space there.

Q There's a space. Now look back at the 1997 one after you got hired on August 19th by the cigarette companies' lawyers. Same page of the '97 resume.

A Page 7?

Q Excuse me, page 8.

A I have that.

Q Look between "efficient utilization" and "determination of medical suitability" and tell me what happens to be in the middle there.

A There is another clinical interest listed here. Would you like for me to read it to you?

Q Isn't that what we were talking about earlier?

A Yes, it is.

Q So in 1996, before you got hired in 1997, on your own resume entitled, "Special Professional Interests," there's a difference between 1996 and 1997, in that you now have a statement that your

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especially interested in occupational- and environmentally-induced pulmonary disorders including occupational asthma and other airways disorders, pneumoconiosis, hypersensitivity, pneumonitis, toxic lung injury and respiratory tract neoplasms; correct?

A There is another inclusion here, yes.

Q And between August 19th and October the 1st,

you had already billed the cigarette companies tens of thousands of dollars, hadn't you?

A I don't know how much billing had occurred. Between what dates?

Q Between the day that I got circled there.

A I can't see your circle.

Q August 1997 and October the 1st, seven weeks or so, you had billed several -- excuse me, tens of thousands of dollars, hadn't you?

A I don't know. I'd have to see that in my billing statements.

Q Okay. And, Doctor, if we look at either one of these resumes, we can look from one end to the other, and we won't find a single presentation you've ever made in there about differentiating pancreatic cancer from lung cancer, will we?

A No. But if you take a look at --

MR. MOTLEY: Your Honor, can I have a yes or no? That's a very simple question.

THE COURT: You can answer that yes or no.

THE WITNESS: Okay.

A No, I have not spoken about differentiating

primary pancreatic cancer from primary lung cancer.

Q Same question. You can look from the first page to the last page of both of those resumes, and you won't find a word in there about your evaluation of epidemiology of environmental tobacco smoke, will you?

A Not -- no, you will not find anything about environmental tobacco smoke in there, that's true.

Q Now, Doctor, you used to practice at a Medcheck?

A Actually, I was the director of occupational and environmental medicine through Community Hospitals, and we provide some of our services through a Medcheck, yes.

Q Doctor, I want you to listen carefully to this question, please, sir.

A I certainly will.

Q And I'll try to keep the pen out of my mouth. Prior to this day, on August the 19th, 1997, prior to that day, you had very little experience in tobacco smoke in terms of mainstream or active smoking; correct?

A That question's vague. I don't know exactly

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what you mean.
Q Well, I'll do it again. You, Steven R. Smith, before August 19, 1997, had very little experience in environmental exposures or in active smoking matters; correct?
A I had not studied that or researched that specifically. I have had, obviously, experience with mainstream smoking, because I have a lot of patients who have been smokers.
Q All right.
A I had not had any special interest in environmental tobacco smoke prior to August of 1997.
Q No interest.
A No special interest.
Q Well, you didn't have any interest, did you?
A Well, I did have interest, yes.
Q Well, you hadn't done anything; you hadn't gone to a library and looked up the first article, had you?
A No, I had not done an independent research of that until I was asked about this assignment.
Q In fact, sir, you had not done any research

on active smoking, gone to the library and looked up certain reports and things like that before August of 1997?
A I have done a lot of research on active smoking but not on a specific case.
Q Well, now, these -- excuse me one second. These nice blow-ups you did, you had commissioned. Where were they commissioned?
A I'm not sure what you mean by "commissioned."
Q Where were they produced?
A They were produced, I think, in Virginia, is my recollection, but I drew the drawings up from excerpts that I had from anatomical texts and told the medical illustrationists what I wanted to have depicted, and he or she drew these up and sent back drafts to me. I took a look at them, made revisions, and I worked on them over a span of about three or four weeks.
Q Well, it wasn't just someplace in Virginia. It was Richmond, Virginia, the headquarters of Philip Morris, isn't it?
A I don't know where Philip Morris is headquartered.

Q How did you get all the way from Indianapolis to Richmond, Virginia, to find somebody to draw up these pretty pictures? Doesn't it say Richmond, Virginia?
A Could you hold it down so I can see the jury as I talk?
Q Excuse me. Does it say Richmond, Virginia?

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A I can't tell you if it says Richmond.
Q Look at it then for me. I got to either get it close to you --
A Yes, it does say Richmond, Virginia. And if you're asking me how that happened --
Q I didn't ask you how it happened. I just asked you if it did happen?
A I didn't go to Richmond, Virginia.
Q You didn't. And there are no medical illustrators in Indianapolis?
A There might be. I have not used them on this type of a case before.
Q You've been down to Richmond, Virginia, or commissioned somebody where Philip Morris is headquartered in a back case before?
A No, I have not been to Richmond, Virginia, at all about any medical illustrations.
Q Have you in the past, Doctor, have you met

with these we -- did you go to Kansas City, by any chance?
A I've been to Kansas City before. I don't know --
Q Got good steaks there, don't they?
A Yes, they do.
Q Well, did you go to Kansas City in connection with doing any tobacco research?
A No, I did not.
Q Did you meet with any scientific scientist from a law firm of Kansas City called Shook Hardy & Bacon?
A No.
Q Did you meet with any lawyers?
A Not that I'm aware of.
Q Okay. Did you get a package of articles to look at?
A I got several packages of articles to look at.
Q And where did they come from?
A A variety of sources.
Q Like? Lawyers?
A Yes. Some of the packages came from Mr. Wagner's law firm. I believe that's where I got most of the information that was

sent to me by the lawyers in the case. And in addition, I did my own independent research from doing a literature search in the library.
Q Doctor, speaking of medical research in the library, did you happen to plug into any of those data systems that have P53 databases, particularly codon 157 -- my people are going to be proud of me, Judge, because I've been mispronouncing that for five weeks now -- codon 157, G to T. Did you plug into that computer?
A I researched that and obtained multiple articles from the literature about P53 and about that specific transverse mutation, yes.

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Q Okay.
A I did not plug into the Hollstein database, if that's what you're referring to, but I did research of the topic.
Q So did you --
MR. MOTLEY: Excuse me, Your Honor.
Q Dr. Smith, did you look at anything like this computer printout here?
A Mr. Motley, I've looked at so many things,

I'm not sure. I don't recall having seen something that looks like this, no. And it's not titled as to where it came from, so I really don't know what it is.
Q All right. Dr. Smith, let me change to another subject now. Did I understand you to say that you don't recall ever working with Mr. Wagner's law firm?
A I've worked with Mr. Wagner's law firm in this matter, yes.
Q You've never worked with him before?
A Not to the best of my recollection.
Q What about Jeanette McCloud?
A Yes. I have -- I have not worked with Jeanette McCloud. I was an expert witness in a case in which Mr. Wagner's law firm and specifically Mr. Wagner was on the other side of me in that case.
Q Oh, they were on the other side of you in that case?
A Yes. I was representing the plaintiff in that case.
Q You were representing the plaintiffs in that case?
A Yes.

Q Well, I hope you beat him. Did you win?
A I'm not sure how it came out. I wasn't trying to win or lose. I was trying to provide an expert opinion about an occupational lung disease case.
Q What kind of occupational lung disease was that, sir?
A This was an individual who worked at Anderson, at Delco Remy, and the case was a case of airways disease, so-called reactive airways dysfunction syndrome from an exposure in the workplace at Delco Remy there.
Q Now, Doctor, let me turn to pancreatic cancer, if I might. Are you familiar with a textbook called The Textbook of Gastroenterology?
A No, I have not seen this textbook before.
Q I take it since you don't publish research papers, you've never written a chapter in a book about the difference between pancreatic and lung cancer, either, have you?
A That is correct.
Q Well, you indicated that the tumors in the head of the pancreas were a certain size; do

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you remember that?
A No, I didn't talk about them being a certain size. I said that there was a distinct difference between cancers of the head of the pancreas and cancers of the body/tail of the pancreas.
Q Well, aren't tumors of the body and tail of the pancreas 5 to 7 centimeters when discovered, usually?
A Not necessarily.
Q Would you agree that's what this textbook says?
MR. WAGNER: Judge, I object to examining the witness about a treatise unless it's recognized by the witness or some other witness in the case as a learned treatise. That's the rule.
MR. MOTLEY: It will -- under 104 I'm telling Your Honor I'll connect this textbook up.
THE COURT: All right. On that basis, I'll how it.
Q Now, you spent 200 some odd hours, Doctor. Did you not look at that textbook?
A No, I didn't look at this textbook, but I

can guarantee you that I've looked at textbooks that show that microscopic and tumors less than 2 centimeters of size can spread to the lung. And, indeed, I think I quoted in my direct testimony that up to 64 percent of those can.
Q Well, I remember all those numbers, Doctor, but would you affirm for me that this says 5 to 7 centimeters is usually the size of the body and the tail?
A No, it doesn't say usually.
Q What does it say?
A It says, "Tumors of the body and tail of the pancreas are larger when discovered because they are detected later than tumors of the head of the pancreas." Which is true. And we don't know what the size of the tumor was in Mrs. Wiley's situation.
Q What does that say about the size of the body and tail tumors when they're discovered?
A It says that tumors of the body and tail of the pancreas are larger, 5 to 7 centimeters, when discovered because they are detected later than tumors of the head of the

pancreas.
That may well be, but according to Mowe's paper in Archives of Surgery, February of 1995, 64 percent of the tumors that are found in the pancreas body and tail are less than 2 centimeters in size.
Q What size is this jelly bean?

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A I don't know. I'd have to measure it. It's certainly less than two centimeters of size. This is approximately 13 millimeters or 1.3 centimeters.
Q 1. what?
A 1.3 centimeters.
Q What's the size of that, do you think?
A This is Playdough, and I'm not sure what -- I can measure it if you want me to measure it.
Q I want you to measure it. Humor me a little bit.
A Do you want it in inches or centimeters?
Q Centimeters.
A Okay. It's approximately 17 centimeters.
Q Gee, does that ring a bell with Mrs. Wiley's tumor, by any chance?
A Which tumor are you talking about.

Q In the lung.
A In the lung, the tumor in the lung? I don't remember the exact specifics, but --
Q How about --
A I believe one of them was actually 20 centimeters in size.
Q How about 17 by 4 by 3 1/2?
A That's what it says here. I guess I was wrong about the 20 centimeters. So, yes, that's about the same size.
Q Okay. And --
A And that would certainly comport with the radiographic studies that I saw. It was about that size.
Q And the 4, does that comport with the 4?
A Actually, this is larger than that. It's about 5 1/2 centimeters.
Q Okay. So it would be a little bit -- we'd have to shave a little bit off; right?
A That's correct.
MR. MOTLEY: I'd like to mark this for ID, Your Honor. I don't know where we're going to find a sticker small enough for my pea here, but what happened to my jelly bean? Maybe we can just mark the

whole can for him. I'll just take one of them out.
THE COURT: All right.
MR. MOTLEY: Mark this, too, please.
Judge, I'm afraid if I only leave one in here, Mitch will have the evidence.
Q What is this size?
A This is approximately 8 centimeters by 2 1/2 centimeters by 2 centimeters.
Q Is that approximately what's in the autopsy report?
A Yes, it is.
MR. MOTLEY: Mark this, please, Your Honor, 116, 117, and 118.
Q Now, Doctor, you indicated that your

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organization you belong to that you're a fellow in, what's that called?
A I'm a fellow in more than one organization. I can list them all, if you'd like for me to.
Q Well, you mentioned one of them on direct. You were a fellow of the College of Occupational Physicians or something like that?

A I mentioned more than one on direct, but one of them is I'm a fellow in the American College of Occupational and Environmental Medicine. I'm also a fellow in the American College of Preventive Medicine and the Central States Occupational Medical Association.
Q The American College of Occupational and what kind of medicine?
A American College of Occupational and Environmental Medicine.
Q All right. And that's the one that's issued a policy statement?
A It has issued a policy statement.
Q Okay. Now, you gave a deposition in this case in November of '97; right?
A Yes, that's my recollection.
Q And you had billed the cigarette companies about $50,000 at that time. Do you remember that?
A I don't know how much I had billed them at that point. I really don't.
Q You had done a lot of work?
A I have done an immense amount of work in this case, that's correct.

Q You had done a lot of work as of November 25th, hadn't you?
A Yes, I had done a lot of that work because I had to be prepared in order to give my deposition with respect to my opinions, yes.
Q Okay. From November the 25th -- and this is March the 16th. Tomorrow is St. Patrick's Day. I should remember that. That's one, two, three, four, five, 36, 97, and 28, 125 and 16. That's 140 some odd days, approximately? Twenty weeks?
A I'm sorry, I'm not following what you're --
Q I'm trying to figure out how many days have gone by since November 25th until today.
A I'm not sure. But that's been about three months, hasn't it?
Q Yes, sir. Now, in that three-month period of time, have you written the American College of Occupational and Environmental Physicians and told them that you have done this study at a cost of $50,000 or more to the cigarette companies and you concluded that their policy statement is wrong?
A No, I have not.
Q Have you written or prepared a letter to the

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editor to let them know that you, Steven Smith, don't agree with them?
A A letter to the editor of what?
Q Of the journal.
A That is not something that the journal published but, no, I have not written a letter to the editor about whether or not ETS causes primary lung cancer in nonsmokers.
MR. MOTLEY: Excuse me one second, Your Honor.
A The college is the author of that policy, and it may have been published in the Journal of Occupational Medicine, but that's not where I saw it.
Q You practice at the Community Hospitals of Indianapolis?
A Yes, I do.
Q Can you affirm that that's a brochure given out at those hospitals?
A Well, it says Community Hospitals Indianapolis, Pulmonary Rehab. I've never seen it before. I presume that your representation is correct, but I don't know if that's the case or not.

Q Well, you said you did some work for the Attorney General's Office. Do you recognize the Indiana State Department of Health on the back of that?
A That's what it says, Indiana State Department of Health. I don't know what that has to do with the Indiana Attorney General's Office, but yes.
Q Well, you don't dispute that this is a brochure put out by the government of the State of Indiana, do you?
A That's what it says. I've never seen it before.
MR. MOTLEY: I move to admit this, Your Honor.
THE COURT: Any objection, Mr. Wagner.
MR. WAGNER: Hearsay, Your Honor.
THE COURT: What's the purpose of the admission, Counselor?
MR. MOTLEY: Your Honor, the purpose of the admission is to demonstrate certain matters related to his testimony, it's on direct about secondhand smoke and lung cancer.

MR. WAGNER: Judge, he just testified he's never seen this before.
MR. MOTLEY: Well, okay. I don't -- it's a demo, Judge. I don't mean to put it in evidence.
THE COURT: All right. It's not offered then. It's used for demonstration

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purposes.
MR. MOTLEY: I'm sorry. I should have said that.
THE COURT: You can pass this down. Ladies and gentlemen, this is not in evidence.
MR. WAGNER: Same objection, Your Honor, to passing out.
THE COURT: All right.
Q Doctor, will you agree that this brochure put out by the State of Indiana and distributed by the hospital system called Community Hospitals of Indianapolis deals with secondhand smoke?
A That's what the title is. I haven't read it, so I don't know what its content is, but that's what the title is.
Q Let's look at the inside. Look at the first

page, folks, please. You see it says, "When people light up, smoke gets in the air"?
A I have that.
Q Okay. And then it describes how the smoke gets into the air. It says, "This smoke has even more poisons than smoke that's puffed by a smoker."
Did your review of the scientific literature, your several hundred hours, lead you to believe that that secondhand smoke has got more poisons in it than smoke that's puffed by a smoker?
A I believe that's an incorrect statement.
Q All right. They say on the next page, "Secondhand smoke causes health problems." You see they use the word "causes"?
A I see they use that, yes.
Q It says, "The poisons in secondhand smoke can burn the eyes, nose and throat and can cause coughing." You agree with that now, don't you?
A Yes. I think the term "poisons" is probably an overstatement, but certainly secondhand smoke does contain irritants, some of which are toxic and some of which are mere

irritants. The term "poison" to me means a toxic substance which does something more than just irritate.
Q Cigarette smoke has got toxins in it, doesn't it?
A It certainly does.
Q Then look at the bottom.
A Carbon monoxide being one. There are several toxic substances in cigarette smoke, in mainstream smoke. And in environmental tobacco smoke, some of those same toxic substances are present, but in much, much diminished concentrations.
Q And it says down at the bottom on the left, right next to the gurney, it says, "Breathing secondhand smoke increases the

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risk of lung problems" and then it's got "cancer."

Do you agree with that statement?

A I definitely do not agree with that statement. I do not believe that the scientific evidence has proved or established that secondhand smoke, or I prefer to use the term ETS, is a cause of primary lung cancer in nonsmokers.

Q Okay. Next page it's got, entitled "Secondhand Smoke is More Harmful to Certain People."

A I have that page.

Q It says, "People with health problems are at greater risk. Secondhand smoke can make things worse for people with heart problems and allergies, breathing problems, such as asthma."

Do you agree with that, that it exacerbates those things?

A Well, I have not studied that to the extent that I have studied environmental tobacco smoke and primary lung cancer.

Q Okay.

A I can tell you that I don't have an authoritative opinion about that, but my impression is, my personal experience is, I believe that people who have underlying lung conditions, such as emphysema, chronic bronchitis, asthma, may indeed have their conditions exacerbated. That's been my personal experience. I don't have scientific data to tell you how often that happens.

Certainly, allergies can also, I feel, in my practice, can be exacerbated by exposure to secondhand smoke. I am not convinced that heart problems are necessarily -- that there is substantive evidence that would establish that heart problems are exacerbated by exposure to secondhand smoke. But here again, I have not studied that subject for this particular case. I have just -- that's just my overall impression from my study.

Q Well, you believe that cigarette smoke contains toxic chemicals, don't you?

A Yes, I do believe that mainstream smoke and secondhand smoke both contain some toxins in them, yes.

Q And that people who smoke are inhaling thousands of different toxic chemicals into their lungs. You've even said that under oath, haven't you?

A Yes. People who smoke are, indeed, breathing in thousands of different toxic chemicals. However, people who are exposed to environmental tobacco smoke, there is not evidence that they are breathing anyways

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near thousands of chemicals that are toxic, certainly at levels that are thought to be toxic.

Practically, anything can be toxic at a significant level. But it's got to do with the dose. And so, therefore, like I explained in my peanut butter analogy, certainly aflatoxin is a toxic substance that can cause problems, but it is -- it has to be at a substantial level or dose, and therein, I think, is the problem with respect to saying that ETS has thousands of toxins in it.

Q Well, sir, does hamburgers cause lung cancer?

A I have not taken a look at whether or not hamburgers cause lung cancer. I can tell you that there are abundant cases of lung cancer that we really don't know what the cause is, and there certainly are some substances that are found in cooked, prepared meat that are the same chemical substances that are thought to be some of the carcinogens in mainstream smoke. So it's conceivable that it could. It's one of

those plausible kinds of things.

I personally do not have any background that would tell me that eating hamburgers is going to cause you to get lung cancer.

Q All right. Pregnant women, at the bottom of that page. "Pregnant women face risks too." It says, "Pregnant women breathe for themselves and their unborn babies. This means secondhand smoke can harm both mother and baby."

Do you see that, sir?

A Which page are you on?

Q The fourth page. I believe it's 4 on the bottom of it.

A Yes, I have that.

Q You agree with that?

A And which -- agree with what again?

Q Well, that pregnant women who breathe secondhand smoke may have babies that are smaller than normal?

A I have not studied that and so, therefore, I'm not prepared to give you any authoritative opinion about that. I see that that's what this says, but I have only taken a look at secondhand smoke with

respect to its cause or lack thereof of primary lung cancer.

Q All right. Do you know Patrick Loehrer?

A I'm sorry, the name?

Q Dr. Patrick Loehrer.

A The name means nothing to me. How are you spelling the last name?

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Q Well, I always called him Loehr until he straightened me out last night. He said he pronounces his name like MacNeil-Lehrer report.
A I don't know Dr. Loehrer or Dr. Loehr.
Q Do you know of the oncology department at the University of Indiana Medical School?
A We call it Indiana University Medical School but --
Q The judge pointed that out to me the other day.
A Yes, but I do know of the oncology department there, yes.
Q Of course, they lost just like South Carolina, so.
A Yes, they did.
Q Now, and we do call it the University of South Carolina, so forgive me if I call it

the opposite of that.
You don't know Dr. Loehrer then.
A I do not.
Q You haven't -- in all of the readings you did on pancreatic cancer, you didn't come across the studies he's done on pancreatic cancer?
A I have not studied every article that's ever been published about pancreatic cancer. But I have not come across the name of Dr. Loehrer. I have come across the name of a lot of other imminent scientists in the area of pancreatic cancer, and his name did not appear on the references that I read. That does not mean that he has not published something. I just am not familiar with it.
Q Okay. Now, Doctor, you testified that you disagree with the EPA on their conclusions about secondhand smoke; correct?
A What I testified to is that I do not believe the scientific evidence proves or establishes that secondhand smoke or environmental tobacco smoke is an established cause of primary lung cancer in people who are not active smokers.

Q And that's, in accordance to your --
MR. MOTLEY: Where is that chart you had, Mr. Wagner, of the four levels of --
MR. WAGNER: Which one?
MR. MOTLEY: I think it's over here.
Q Do you know what -- this is your chart, remember?
A Yes, I remember that.
Q Okay. Do you know what the word "preponderance" means?
A I might not be able to give a dictionary definition, but I think it means the weight of the evidence more likely than not.
Q The greater weight of the evidence.

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Correct?
A That would be my understanding, yes.
Q All right. And you don't -- as you sit here today, you don't know what the Judge is going to tell this jury what the legal standard is for proving causation in this courtroom, do you?
MR. WAGNER: Objection, Your Honor, irrelevant.

THE COURT: He can answer that.
Q Do you?
A My concern is with medical causation, I didn't --
Q That's a simple question. Do you know what the Court's going to tell the jury the legal standard is for this case in this courtroom, in this trial?
A Absolutely not.
Q All right. Your medically certain standard is 99 percent likelihood. That's what you got right here. You created this chart, didn't you, medically certain?
A The standard for what?
Q For causation.
A I'm not -- there are four different standards for causation of which --
Q Is one of them this one?
A Yes, it is.
Q 99 percent; right?
A Yes.
Q That's much greater weight, ain't it?
A Yes, it is. Greater than 51 percent.
Q All right. Now, are you familiar with the California EPA report?

A I have read portions of that, yes. I'm not intimately familiar with it, but I have read portions of it.
Q Are you aware that while this trial was going on, sir, the British equivalent of the Surgeon General of the United States issued a report on secondhand smoke?
MR. MOTLEY: Your Honor, do you have that original I gave you?
THE COURT: I believe we do.
MR. MOTLEY: Judge, I may have just given it to you. I don't know if I marked it.
THE COURT: I remember seeing it.
MR. MOTLEY: Kind of had a slick cover to it. I've got a Xerox copy, but I was going to --
THE COURT: Well, if you have a copy, let's go on.
BY MR. MOTLEY:
Q Dr. Smith, have you seen this study put out by the Report of the Scientific Committee on Tobacco and Health in March of this year?
A No, I have not.
Q So in your testimony to this jury, you had

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unavailable to you on the issue of whether secondhand smoke causes lung cancer, you didn't have this British report, did you?
A No, I did not.
Q Can you --
MR. MOTLEY: Can the witness come down, Your Honor?
THE COURT: Go ahead, Doctor.
Q Do you see, sir, in that copy I gave you something called "key messages"?
A Well, I haven't seen it in here.
Q I'll tell you what context. I'll help you out.
A This is the table of contents.
Q Yes, sir. You see where it says "key messages"?
A You show it to me.
Q Okay. Well, they shortchanged you page 2. That's why he couldn't find it. Look at my copy. "Key messages." Okay.
A I see this, but I've not read it before.
Q I understand. "Active Smoking. Smoke is a major cause of --" now, you're going to -- you and I do like this, you won't block anybody. "Active smoking," would you read

that, the first one?
A "Active smoking"?
Q Yes, sir.
A "Smoking is a major cause of illness and death from cardiovascular disease, chronic respiratory disease, and cancer of the lung and other sites."
Q Okay. Next sentence.
A "It is the most important cause of premature death in developed countries and accounts for one-fifth of all deaths in the United Kingdom, some 120,000 deaths a year."
Q Let's leave off how many they killed in the United Kingdom, but do you agree generally with that statement if we take out the part about how many died in the United Kingdom?
A This is a very compound question with multiple diseases involved, and I can't agree with that. I have not studied that. I can tell you that the term "cause," with respect to a chronic disease, is problematic.
I can tell you my personal feeling is that cigarette smoking, active smoking, is a very significant risk factor, and it

contributes to the premature death of a certain number of individuals. We don't know how many. We don't know exactly what the mechanism is. But I can tell you that it's -- my personal feeling is, although I have not studied active smoking to come before you today to talk about that, my

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personal feeling is that it is a significant contributory factor to premature death, yes.
Q Let me ask you this: Do you believe that active cigarette smoking has ever caused, to your definition of cause, the death of a single American? Caused it? Not a risk factor.
A Yes, I believe that, on a given individual, that cigarette smoking is the factor that caused that individual to die of lung cancer, yes.
Q Thank you, sir. Now, we're not done yet. Now, let's see. How about passive smoking. Would you look at passive smoking, please, sir, which is right here. The British government, after studying all the world's literature, if you would read what they concluded.

A It says, "Passive smoking is a cause of lung cancer in childhood respiratory disease. There is also evidence that passive smoking is a cause of ischemic heart disease and cot death." I presume they're talking sudden infant death syndrome. "Middle ear disease and asthmatic attacks in children. Restrictions on smoking in public places and workplaces are necessary to protect nonsmokers. Parents need to be informed about the effects of passive smoking on their children."
Q I take it you don't agree with the statement that the British government issued during this trial after studying all the world literature that passive smoking is a cause of lung cancer?
A Well --
Q Yes or no. You don't or you do?
A Well, I don't -- I haven't seen -- if you're talking about what I just read? Yes, I do not agree with that, since my review of the literature would indicate that there have been multiple epidemiologic studies that are negative. I don't think one additional

person or one additional agency taking a look at the same data and opining that it caused it is necessarily compelling to me. I not believe that the weight of the scientific evidence establishes primary -- secondhand smoke or ETS is a cause of primary lung cancer.
Q Look at this article, sir, called "Passive Smoking History Repeats Itself. Strong Public Health Action is Long Overdue," in the British Medical Journal. You're familiar with the British Medical Journal, aren't you?
A I'm familiar with it. I don't subscribe to it nor do I read it regularly, and I have not seen this article.

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MR. MOTLEY: Your Honor, 104 again. The next witness will corroborate this.

THE COURT: On that representation, you may ask him about it.

Q Well, you remember you told the jury about all the studies that have been negative. Will you look at this article, down at the -- next to, let's see, about two-thirds of the way down, on the first page, when he

talks about how many epidemiological studies there have been.

The paragraph reads, "The next watershed was publication of a comprehensive report on environmental tobacco smoke by the U.S. EPA."

You see that, in 1993. Then he says, "By that time, 30 epidemiological studies had been published, 24 of which showed a positive association. Not negative."

Do you see that?

A I'm reading what you say, yes.

Q I read that correctly; correct?

A You read that correctly.

Q You don't agree with that analysis by this epidemiologist; right?

A That is correct. I do not agree with that because --

Q And you're not an epidemiologist.

A No, I am not. But I have special training and expertise in epidemiology and was tested on epidemiology in order to pass my boards in occupational medicine.

Q Doctor, my question to you is: You've never published an epidemiological study.

A No, I have not.

Q You've never been asked to critique an epidemiological study by a government agency, have you?

A No, I have not.

Q The only people that asked you to go out and look at epidemiological studies were the cigarette companies; right?

A That's not true.

Q Well, I'm talking about ETS. You already admitted before August 19th you knew very little about environmental tobacco smoke, and then you spent 200 some odd hours learning about it.

A No, I didn't spend 200 some hours learning about that. I spent about, between 100 to 120 hours studying the generic issue of ETS as a cause of primary lung cancer.

Q I'll start over. You spent 100 to 120 hours looking at the generic issue of ETS at the request of the cigarette companies. Correct?

A At the request of Mr. Wagner, who retained my services, and I understand that he obviously represents the cigarette

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companies.
Q Which one does he represent, do you know?
A I believe his client is RJ Reynolds.
Q All right, Doctor, let me move on to something else here now.
Now, you've testified that Dr. Turner, when she did her bronchoscope -- how do you pronounce it, bronchoscope?
A Bronchoscopy.
Q Bronchoscopy. Didn't see a tumor, didn't you say that?
A Dr. Turner had two different reports of her bronchoscopies. They were somewhat difficult to figure out, but the representation that she made in those reports was that the bronchus intermedius was occluded by neoplasm, but there was no documentation that there was actually a neoplastic lesion seen, any sort of tumor or tumor mass in the airway itself.
MR. MOTLEY: I'm reading from 357, Your Honor.
Q This is the testimony in this trial of Dr. Turner, who came in here and testified in person about what she saw.

MR. WAGNER: Judge, objection. It's totally improper to cross-examine a witness with testimony by some other witness in the trial.
MR. MOTLEY: I never heard that objection except here.
THE COURT: You're asking him to look at that to himself.
MR. MOTLEY: I'm asking him to look at it himself.
Q Did you look at it, sir?
A What do you want me to look at?
Q I highlighted it, right there.
A There's several things highlighted. Which one?
Q This one.
A Okay. I've read that.
MR. WAGNER: Do you have copies for me, Counselor?
MR. MOTLEY: I'll give you this one.
Q Doctor, whether you believe her or not, Dr. Turner testified there wasn't any doubt in her mind that she saw a tumor in the airway, didn't she? Isn't that what she

says?
A That's what she says.
Q Now, with respect to Dr. Bennett, isn't it true, Doctor, that Ms. Wiley lost about 10 percent of her body weight?
A Actually about 12 percent of her body weight.

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Q 12 percent of her body weight. Isn't there a word doctors use to describe a lot of weight loss?
A There are several words for that. I don't know which one you're talking about.
Q Give me a couple. Maybe it will be the one I'm thinking about. Cachectic?
A Cachectic is a word, C-A-C-H-E-C-T-I-C.
Q Okay. What does that mean?
A That means wasting disease.
Q Wasting away. You don't believe that losing 10 percent or 12 percent of your body weight fits that definition, does it?
A It is not a definition that is driven just by the amount of weight loss. Cachexia is a condition that involves weight loss, muscle wasting and debilitation. So you cannot define it just merely by how much of your

body weight you lose. For example, if you go on a diet and lose 12 percent of your body weight, you're not cachectic.
Q Someone who weighs 140 pounds, if they lose -- going into the hospital, if they lose 12 percent, they lose 20 pounds; right? No, not that much. What's 14?
A 20 percent of 140 is 28 pounds.
Q I said 12 percent. 0, 8, 2, 0, 4, 1. They would be losing 16 pounds.
A I can't see your math, but I would agree with it if that's what you say the calculations work out to.
Q 16.8 pounds.
MR. MOTLEY: Excuse me, Your Honor.
Q And on June the 20th in the hospital her weight actually went up, didn't it?
A Yes. Mrs. Wiley was gaining weight because she was -- while she was in the hospital for two reasons: First of all, the tumor was growing rapidly, and so there was a significant amount of weight gain that was related to the tumor. And here again, this speaks to it being primary pancreatic cancer because of the doubling time as opposed to

primary lung cancer. And the more important thing --
Q Wait a minute. Can I stop you there with that thought?
A Sure.
Q Would you hold that thought. In other words, you say she was gaining weight from the tumor and that's consistent with pancreatic cancer. That's what you just said?
A That's -- you didn't let me finish my answer. If I would have been allowed to, I would have explained to you the totality of her weight gain. Her weight gain was related to two things. A small amount of it related to the tumor in the chest growing.

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Secondarily, and more important, was fluid retention, and her X-rays revealed that she had increased pulmonary vasculature; and they actually had to diurese her and give her a diuretic to get rid of some of the fluid out of her lungs because she was fluid overloaded.

And, indeed, when she was actually autopsied, her weight was down to 120

pounds. So in January she was 149, when she went into the hospital she was 132 pounds. She gained some weight during that hospitalization, related primarily to fluid retention. And then when they diuresed her, she actually died at a weight of 120 pounds.

Q Doctor, I want to be clear about this, because I may ask somebody else this question. Are you telling the jury that her gaining weight is consistent with pancreatic cancer?

A Not -- I think you've mischaracterized what I've just said.

Q So it's not.

A I'm sorry?

Q It's not characteristic of pancreatic cancer.

A No. Weight loss is what's characteristic of pancreatic cancer. But weight loss is what's characteristic of all types of cancer. Unless you have fluid retention or ascites, which is fluid in the abdomen or pleural effusion or increased tumor mass. So you cannot say that because someone gains weight, that they don't have cancer, of any

specific organ.

Q Since your deposition on November the 25th, 1997, have you diagnosed -- have you treated anybody whom you've diagnosed with lung cancer?

A No, I have not.

Q Same --

A I should restate that.

Q You've treated somebody since November the 25th, '97, who has lung cancer. You've treated them?

A First of all, I don't treat lung cancer.

Q All right.

A I do diagnose it and screen for it, and we screen over a thousand individuals each year for primary lung cancer related to exposures in the workplace. I do have one patient that we saw a couple of weeks ago that has a nodule or tumor on their chest x-ray and we're in the midst of trying to find out whether or not that's a primary lung cancer, a granuloma, or some other type of a lesion.

Q You're in the diagnosis stage, not the treatment stage.

A Of cancer.

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Q Right.
A Yes.
Q Okay. Now, have you diagnosed and treated anybody with pancreatic cancer since November 25th?
A No. And that's understandable, because pancreatic cancer is not a condition which is thought to be, by and large, occupationally or environmentally related so, therefore, I wouldn't see people with primary pancreatic cancer.
Now, I do see people that are very similar with Mrs. Wiley that present with back pain in her age group, and so primary pancreatic cancer is always a concern of mine, particularly in an individual such as Mrs. Wiley who did not have a reason for back pain when it had its onset in February of 1991.
Q Doctor, isn't it fair since you started practicing medicine, not when you were in medical school, you have not been involved in the care, the treatment of a single person where you asked the question, as a clinical treater of cancer, does this woman

have pancreatic cancer or does she have lung cancer? For treatment purposes. Not one.
A I can't answer that. I don't recall anybody where that specific question has arisen, but in 22 years of practice, it may well have.
Q If it did happen, it's not so close in your mind that you recall it?
A That is correct.
Q All right. Do you normally go out, Doctor, without an assignment from Mr. Wagner and read textbooks on treating pancreatic cancer since you don't see them in your practice?
A When I am asked to do a causation analysis, such as this, when pertinent items come up, I don't wait for the lawyer to tell me what to read. I independently research what I feel is appropriate.
When I first took a look at this case, I was struck by the fact that the clinical findings, the physical findings, the radiographic findings --
MR. MOTLEY: Your Honor, I didn't ask him all that. Now he's going back in his direct testimony, I asked him a simple question.

THE COURT: Repeat your question.
Just answer his question.
Q I want to know a simple question, sir, okay? I told you we'd get along much faster if you listen to them and I talk slow. Let me try again.
You have not, you have not, gone out

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and researched the literature on comparing pancreatic cancer with lung cancer as a differential diagnosis and treatment ever in your career as an occupational physician, have you?

A I've never been presented with a case like this, so the answer is no.

Q All right.

MR. MOTLEY: Your Honor, I'm moving along here. Give me a minute, let me look at my notes. Can I have a minute to consult with Mr. Patrick?

THE COURT: Yes, go ahead. Go ahead.

Q Doctor, would you identify that for us, please, what I've just given you.

A Well, it looks like my writing, and it's on a script of the Chaminade at Santa Cruz in

California. I was out there for a meeting, and it looks as though those are some notes I made when I was out there, yes.

Q Those are your handwritten notes.

A Yes, the first page is that. I see the second page is essentially the initial contact. My recording of the telephone conversation from Mr. Wagner back on August 19 of 1997. Those are my notes. And it looks as though there are other things that may be out of order, I'm not sure, they're not all titled, so that does look like my writing, yes.

Q That's all your writing?

A Yes, it is.

Q About this case?

A I don't know. I haven't read it all. I presume, if you represent to me it's all about this case.

Q You produced them at your deposition, so I assume you would have produced notes relative to this.

A I didn't make copies. I believe one of your team members.

Q Just look at it then.

A I'm looking at it. I've looked at it. It looks like all of my notes. It does look as though they pertain to Mrs. Wiley.

MR. MOTLEY: Move to introduce these into evidence, Your Honor.

MR. WAGNER: No objection.

THE COURT: 120 will be admitted.

(Plaintiffs' Exhibit(s) 120 received in evidence.)

Q Can you help us with the date of those notes, sir?

A I don't have the notes before me. You took it away, so...

Q I'm sorry.

A There are four pages here, the first page is undated. And I don't know.

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Q You were --
A I think I was probably --
Q -- you were in Santa Cruz, California?
A Yes.
Q It would have been after August 19?
A Yes, I believe it was probably in October of '97.
Q Okay. And then the other pages would be, it's actually got the next one has a date on

it, August 19?
A That's August 19, 1997, that's when Mr. Wagner first contacted me.
Q Okay.
A The next page is undated, and I have no clue when that was written.
Q Okay.
A And the next page is undated and I have no clue when that was written. Sometime between August and now.
Q Now, Doctor, are you aware that on June the 6th, 1991, there was, in fact, a bronchoscopy on Mrs. Wiley?
A Yes, I'm aware of that.
Q And are you aware that she said that I can't take it anymore?
A Who is she? Mrs. Wiley?
Q Yes.
A I am not aware of that, no.
Q See if you can help me with this, please. Right there. "Can't take it. Tolerated it poorly."
A What I can read is, looks as though this is a nursing note dated 6/6/91, says "Patient now using PCA for pain management. States

is getting good relief from PCA. Patient had bronchoscopy today and tolerated it poorly. States," and I -- I can't read what it says, looks as though it says "no more," but I can't read what it says after that. Maybe you'll do a better job than me.
Q It says, "I can't" something, and then we, the Xerox copy obscures it. Turn the page, please, sir. What does it say now? "I can't" what?
A I can't read what it says at the bottom of this page. It says "States, 'no more.'"
Q I can't --
A And then I can't read -- if you say it says "I can't," I will say that's what it says, but I can't read that. And then the top of the next page, at least the part that you have highlighted says, "Take any more." Looks like close quote. "Patient in good spirits, despite agony experienced today. Dr. Dickerson is in, is to see regarding radiation therapy. 6/6/91."
Q Now, let's assume that says I can't take it anymore, okay? Then it says -- does it say agony?

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A Yes, it did mention about --
Q You've looked at the records in this case. Would you -- I know cancer is never a pleasant thing for anyone to have. But would you agree, sir, that this woman went through an extraordinary amount of pain in a very short period of time?
A I would.
Q And it was a pretty horrible way to die, wasn't it?
A Yes, it was. And pancreatic cancer, we talk about --
MR. MOTLEY: Excuse me, Your Honor. Every time I ask him a question, he wants to launch into --
THE COURT: You answered the question.
THE WITNESS: I'm sorry.
Q Are you aware, sir, that she had a consult about her concerns and fears? Would you read those in the record, please. That's part of the records you looked at, I believe.
A Yes.
MR. WAGNER: Judge, this is

certainly outside the scope of direct examination.
MR. MOTLEY: Your Honor, he said he looked at all the records in this case.
THE COURT: Overruled. Go ahead.
A Yes, I looked at the records. I did not look at every line entry of all the nurse's notes, but I did take a look at all the records that I thought were relevant to a causation analysis.
Q Read that for us, please.
A Highlighted area says, "Discussed emotions associated with diagnosis of cancer to include not seeing grandchildren grow up, concerns about leaving husband behind, and her own impending death." I can't read what the last thing says.
MR. MOTLEY: Your Honor, let me consult, and maybe we can be done with the doctor.
THE COURT: All right.
Q Doctor, I think the final area I want to ask you about, and I'm going to get you out from under all these charts. You obviously have not been in this courtroom during the trial

because you're not allowed in. You know, there's a sequestration or separation order. So when you talk about the only exposure she ever had being at the VA Hospital, you're saying that without knowing what the nurses who worked with her and went to school with her and worked with her at other hospitals

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have said in this courtroom, aren't you?
A That is correct.
Q So you don't know, as you sit here today, whether this jury has heard evidence that Mildred Wiley was exposed in hospitals in the '50s, '60s and before she went to the VA Hospital in the '70s, do you?
A I don't know any of the testimony that's taken place before mine today, yes.
MR. MOTLEY: Your Honor, no further questions of the doctor. Thank you.
It's nice to meet you, sir.
THE WITNESS: Thank you, sir.
THE COURT: Thank you, Mr. Motley.
Mr. Wagner, any redirect?
MR. WAGNER: I have just a few, Your Honor.

REDIRECT EXAMINATION
BY MR. WAGNER:
Q Again, sort of go from backwards last to first, Doctor. When you testified about the fact that according to the records that you've examined that Mrs. Wiley didn't have any exposures to environmental tobacco smoke outside of the Veteran's Administration Hospital, do you remember reading a passage in Mr. Wiley's deposition that spoke to that issue?
A There was more than one passage I remember reading about that.
Q And, in fact, is that in part what you relied upon in forming your opinions in this case about that subject?
A That in addition to the deposition transcripts of Mrs. Addington and the Wileys' son, yes. The record was clear that Mrs. Wiley's exposure to environmental tobacco smoke was confined to the VA Hospital in Marion. At least that's what the generated, the contemporaneously generated evidence in this case would indicate.

Q Do you recall that Mr. Wiley testified in his deposition that as he sat there at the deposition, he could not think of any other place outside the Veteran's Administration Hospital where Mrs. Wiley had any exposures to environmental tobacco smoke?
A I do recall that, yes.
Q Not having heard the testimony in this case, or any reference to it, you're not familiar in any way with Dr. Jenkins' testimony about his interviews with co-workers of Mrs. Wiley; would that be correct?
A That's correct.
Q Mr. Motley asked you if you had ever been involved in a case where you had to make a determination whether or not a cancer was

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primary to the pancreas or primary to the lung; correct?
A Yes, I remember that question.
Q And I think you said that you had not; right?
A I didn't recall any, yes.
Q Didn't recall any. But my question to you is: Have you been presented with cases in the past where you had to make similar kinds

of analyses, similar to those that you had to make in this case?
A Yes. This is the preponderance of what I do in my medical consulting practice with respect to causation, and it's not solely cancer cases, but cancer cases are the ones that are some of the most difficult to determine. So whether or not the cancer is primary to an organ or secondary to that organ is a situation, a question I'm often confronted with.
Q Let me frame the question this way: Does the size of the tumor in the pancreas, if you have a primary pancreatic cancer, does the size of the tumor that is in the pancreas as compared to the size of the tumor in the lung, if you have a metastatic lesion in the lung, tell you anything about which one was the primary?
A Absolutely not. Although it can give you some indication in some situations, I think I quoted the mouse study from the Archives of Surgery in February of 1995 in which they took a look at cancers, including cancers of the pancreatic tail or body, and of those

that were less than two centimeters in size, now, that's a little bit bigger than the jelly bean that Mr. Motley gave me, but it's still small, of those, 64 percent of those had already metastasized extensively.

And of the ones that are only microscopic, in other words, you couldn't detect or feel a cancer tumor of any size from looking at or cutting the gland but could only see it under the microscope, 60 percent of those had metastasized.

And indeed, there is a large series of studies that talk about the cancers of the pancreatic tail and body where the tumors are massive in the right lung predominantly, so this is not unusual at all. This is a very typical presentation for primary adnocarcinoma of the pancreas, particularly of the body/tail of the pancreas metastasized to the chest and lung.
Q In fact, do we know -- not we know, but do you know or can you tell from the review of the medical records that you have seen in this case what the size of the cancer was in Mrs. Wiley's pancreas?

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A No, as I mentioned earlier, we can't tell, because a good analysis of that at autopsy was not performed. We know that there are several cuts that revealed that the pancreas was involved, but we don't know if it was a two centimeter tumor, a five centimeter tumor, we don't really know what size it was.

We do know that it did not extend into the head of the pancreas, to the area where it would have blocked that bile duct we talked about. Otherwise, Mrs. Wiley would have been jaundiced. And had she been jaundiced, I don't think there would have been as much difficulty making the diagnosis of primary pancreatic cancer.

Q Doctor, as to these anatomical charts and the questions you were asked about them, coming from Richmond, and so forth, it was you who asked for those charts to be made; right?

A Yes, I told you early on I felt in order for me to clarify my testimony for the jury, I was going to have to have some graphics. I made reproductions from various anatomical

texts and said is there a medical illustrationist that you as the defendants would want to use on this, and then I instructed the medical illustrationist, he and I talked on the phone several times, we faxed back and forth these documents until I got them exactly the way I wanted them in order to depict what happened to Mrs. Wiley.

Q You don't concentrate on writing and publishing articles, do you, Doctor?

A No, I'm a clinical practitioner, and I have responsibilities for running a large program, so I'm not involved in research or academic kinds of endeavors.

Q In fact, these papers that are set out and described in your curriculum vitae are really, as I look at them, for the most part presentations that you've made at various conferences; isn't that so?

A That is correct.

Q And you make those presentations because somebody asks you to come and talk to them about a particular subject, so you prepare a paper in connection with that talk or presentation; isn't that right?

A Yes. One of the things in occupational medicine that we try to do is to impact as many people as we can. And if I can get to a work force through their employer or a group of employers certain important concepts, it's much more effective than I can do one-on-one with a bunch of patients,

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so I do a lot of speaking with respect to that to try to improve the knowledge about various occupational- and environmentally-related problems.

Q Mr. Motley questioned you about the fact that before August of 1997 you had little experience with environmental tobacco smoke. Do you recall those questions on that?

A I do recall that.

Q Now, Doctor, is that unusual in your occupational environmental medicine practice, with respect to the causation of disease, for you to have to sometimes do research on areas that you haven't had any familiarity with before?

A No, it's quite common. I mean, there are hundreds of thousands of chemical compounds, and oftentimes a client, a business, a

patient will ask me, is this problem related to this exposure, and I can't possibly know everything about all of the chemical compounds. So then I have to go and take a look at the literature, and that's where that generic causation piece comes in. So that's quite common.

Q And, Doctor, in this case, I did not ask you to come to court and testify or express opinions as to whether active, mainstream smoking causes lung cancer, did I?

A No, you did not.

Q In fact, no defendant in this case asked you to come to court and testify on that subject; isn't that also true?

A That is correct.

Q I want to hand you a copy of Dr. -- I want to hand you a copy, I only have one, a copy of Dr. Turner's bronchoscopy report, ask you if you've seen that before.

A Yes. This is the first rendition. There was one that was dictated apparently the day of the bronchoscopy and then there was one dictated a month later, so this is the one that was dictated on the date of the

bronchoscopy, 6/6/91, and I am familiar with that.

Q And Mr. Motley asked you some questions about nurse's notes and, apparently, written after the bronchoscopy; correct?

A Yes.

Q And but at the time of the bronchoscopy, can you read to the jury what Dr. Turner wrote with respect to whether or not Mrs. Wiley tolerated the bronchoscopy?

A Yes. At the conclusion here, the statement is, "She did tolerate it well."

Q And you were shown a copy of a transcript of Dr. Turner's testimony in this case, you remember that?

A I saw a page of that, yes.

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Q And you haven't seen the cross-examination of Dr. Turner, have you?
A No, I have not.
Q As to the amount of money that you charge in this case, Doctor, have you made any extra money in this case by working in this case and expressing the opinions that you've expressed today?
A No. My fees are the same regardless, and I

actually have about twice as much work as I could do, so really, I'm not going to be any better off economically as a virtue of taking this case.
Q A couple more questions about some of these articles. First of all, the Community Hospital article that Mr. Motley questioned you about. Isn't it a fact that there are a lot of these kind of publications?
A Yes, I believe that there are a lot of publications around that speak about secondhand smoke.
Q And they're all based more or less upon the same data and epidemiologic studies and so forth that you've testified about today; isn't that right?
A Yes, and I'm more interested in the primary research upon which these opinions are based rather than reading somebody else's interpretation of those.
Q And this article in the British Medical Journal that you were questioned about, remember those questions?
A Yes, I do.
Q I'll just read to you the -- it says in the

area that Mr. Motley asked you about, "The next watershed was publication of a comprehensive report on environmental tobacco smoke by the United States Environmental Protection Agency in January of 1993," and then it went on and discussed the 30 epi studies on passive smoking, which showed a positive association. But those are the same studies that you've already described to the jury that were statistically flawed; isn't that so?
A Not only statistically flawed, but even the relative risk, the strength of the association is very, very minimal. If I were to take a look at any other substance that had a relative risk of 1.19, which is the relative risk that was concluded based upon the epidemiologic studies for the EPA, and had all these other problems, dose not quantified, recall bias, lack of confirmation of diagnosis at autopsy, all of those things, it really is not at all compelling evidence that there is a causal relationship here.
Q And then lastly, Doctor, Mr. Motley asked

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you about this report on the scientific committee -- report of the Scientific Committee on Tobacco and Health that was published in Great Britain, you remember that?

A Yes, I do.

Q You've never seen this document before?

A I never have.

Q And so you have no idea what the conclusions are, the opinions that were -- that you were questioned about that are in this report are based upon, do you?

A No, I don't.

Q And if they're based on the same epidemiologic studies and matters that you've testified about, you wouldn't agree with those statements insofar as they relate to passive smoking, would you?

A No, I wouldn't. My take is that, of the spousal studies done in the United States, 15 out of the 16 of them were negative studies. They did not show an association that was statistically significant. And of the workplace studies, eight out of the nine workplace studies of the epidemiologic

exposure to environmental tobacco smoke in females were negative studies. So the vast majority of the studies are negative studies, by my interpretation.

And if there has been another study added it certainly wouldn't countervail the studies that have already been done that are negative. So I do not think the scientific evidence proves that environmental tobacco smoke causes primary lung cancer.

MR. WAGNER: That's all I have, Your Honor.

Thank you, Doctor.

MR. MOTLEY: Two questions, Your Honor.

THE COURT: Go ahead.

RECROSS-EXAMINATION

BY MR. MOTLEY:

Q Doctor, if I understand you correctly, you have absolutely not a clue what the United Kingdom Surgeon General looked at when he made the conclusion I read you, correct, because you have not seen the study?

A I have not reviewed the study, that's correct.

Q If there's another study that involves thousands of people, you just wouldn't know about it, would you?

A If it's in that publication, I wouldn't.

Q Okay. Final question: Are you telling the jury that while you were doing all this work for the cigarette companies, you took a

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leave of absence from your work and you didn't work your normal job?

A Oh, no, I worked the same hours, yes.

MR. MOTLEY: No further questions.

THE COURT: Doctor, thank you very much. You may step down.

Mr. Ohlemeyer?

MR. OHLEMEYER: Yes, Your Honor, I'd like to read from the deposition of Philip Wiley.

THE COURT: All right. How do you propose to do that, Counselor?

MR. OHLEMEYER: I'm just -- it's a brief excerpt. I'll just read the questions and answers.

THE COURT: All right. That would be fine.

MR. OHLEMEYER: This is the

deposition of Philip Wiley taken July 19, 1994.

Beginning at page 5, "Philip Wiley having been first duly sworn to tell the truth, the whole truth, and nothing but the truth relating to said matter was examined and testified as follows:"

Page 7. "Question: The first thing I want to ask you is to let me know -- will you let me know if you don't understand any of the questions I ask you?

"Answer: Yes, I will."

Page 28: "Mr. Wiley, can you describe or identify for me any of the brands of cigarettes that people were smoking at the nurse's station when you saw people smoking at the nurse's station?

"Answer: No, sir.

"Question: How about in the break room; can you identify for me any of the brands of cigarettes that you saw people smoking in the break room when you saw people smoking in the break room?

"Answer: No.

"Question: Aside from Dr. Turner, did

any other doctor at any time before your wife's death tell you that he or she thought your wife's illness had anything to do with cigarette smoke?

"Answer: No, sir.

"Question: How about after your wife's death; has any doctor told you that he or she thought your wife's illness or death had anything to do with cigarette smoke?

"Answer: No."

Page 30: "Question: Did any doctor suggest that you should authorize an autopsy of your wife?

"Answer: Dr. Turner suggested that so we could find out the real cause of my wife's death.

"Question: Can you tell me when the subject of an autopsy first came up?

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"Answer: The day she died.
"Question: Had you discussed it with anyone before her death?
"Answer: No. I answered her on my own, gave her my permission."
Page 35. "Question: At the time of your wife's death, had you ever heard that

there were any health risks associated with exposure to environmental tobacco smoke?
"Answer: I just know we didn't want to be around areas where there was smoking.
"Question: Why was that?
"Answer: We just felt it was a risk for our health.
"Question: When was the first time that you and your wife made an effort to avoid exposure to other people's cigarette smoke?
"Answer: I guess all of our married life."
Page 39. "Question: Is it fair to say that the purpose of this lawsuit is to encourage people to stop smoking in the workplace?
"Answer: It's their privilege to smoke, but I don't think they have to smoke where I work. That's --
"Question: So would the answer to the question be yes?
"Answer. Yes."
Page 48. "Have you ever met with any of your wife's co-workers in order to

discuss this lawsuit?
"Answer: No.
"Question: Have you ever met with any of your wife's co-workers in order to discuss your wife's employment history?
"Answer: No, sir.
"Question: Have you ever met with any of your wife's co-workers for any reason aside from what you've told me about already?
"Answer: Since her death, is that what you're saying?
"Question: Yes.
"Answer: Yes, I have visited a few.
"Question: Who are they?
"Answer: Let's see. We had a good friend in town. That was Betty Jeffers.
"Will you spell that for the court reporter.
"Answer: I can't tell you right off. Jeffers. Jeffers.
"Question: Do you know what street she lives on?
"Answer: She lives in [DELETED], I do not know the street.

"Question: Anyone else?
"Answer: Marilyn Bardsley. She was a close friend of my wife. She was also a

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staff nurse at another building."
Page 63. "Question: What sort of things prior to October of 1990 would aggravate her sinus drainage?
"Answer: She thought being around smoke, I guess.
"Question: When was the first time that she told you that being around smoke aggravated her sinus drainage?
"Answer: I do not know the time.
"Question: Let me back up. What type? Was there any specific kind of smoke she thought aggravated her sinuses?
"Answer: I don't know.
"Question: You don't understand what I'm saying. You know, fireplace smoke, barbecue smoke, cigarette smoke.
"Answer: Cigarette smoke.
"Question: So at some point your wife told you that cigarette smoke aggravated her allergies?
"Answer: Yes.

"Question: Can you recall when that was?
"Answer: No, sir.
"Question: Can you recall whether it was in the decade of the '80s as opposed to the '70s?
"Answer: I cannot tell you.
"Question: Was it something -- well, can you give me your best estimate?
"Answer: I'd say in the past 20 years.
"Question: Did your wife tell you that exposure to tobacco smoke or cigarette smoke aggravated her sinus drainage problem before or after she started working at the VA Hospital?
"Answer: I can't recall if it was before or after. I just don't know."
Page 65. "Question: Did the doctor, the allergist that she saw in October of 1990 prescribe any medication or recommend anything to your wife to deal with her allergies?
"Answer. I believe at that time she stopped drinking coffee.
"Question: Had she been a big coffee

drinker before that? Let me rephrase the question. Big is not a very descriptive word.
"Had your wife been a coffee drinker before the time you had known her?
"Answer: Yes.
"Question: How many cups of coffee a day would she drink on a typical day?
"Answer: I have no idea, sir." Page 70. "Question: Prior to March of 1991, had your wife ever had any problems with her back?
"Answer: Yes. Back strain.
"Question: When did that happen?

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"Answer: I can't tell you the time.
"Question: Was it a matter of months or years before March of 1991?
"Answer: I'd say several months. I can't tell you.
"Question: Did she see a doctor?
"Answer: I'm sure she did.
"Question: Who would she have seen?
"Answer: Dr. Toney was her family doctor."
Page 76. "Question: While Dr. Turner

or other doctors took life histories from your wife, were you present?
"Answer: I was present at the time Dr. Turner did the examination.
"Question: What about any other doctor? Where is Dr. Turner located?
"Answer: Ball Memorial Hospital.
"Question: Were you present at Ball Memorial Hospital?
"Answer: Yes.
"Question: When other doctors talked with your wife about her life history.
"Answer: Uh-hum.
"Question: The answer is yes?
"Answer: Scott Walker, the surgeon.
"Question: Aside from Dr. Turner and Dr. Walker, did you assist your wife in providing a life history to any other doctor that you can remember?
"Answer: Not in my presence.
"Question: When you were present with your wife, and when doctors were taking histories from her, did you do what you could to help her accurately and completely describe her life history?

"Answer: Yes.
"Question: If she made a mistake or stated something that you believed to have been incorrect, would you have corrected her and pointed that out to the doctor at the time?
"Answer: No, sir.
"Question: Why not?
"Answer: She was correct.
"Question: So to your knowledge, your wife made no misstatements or incorrect statements of facts to the doctors that were taking histories from her in your presence?
"Answer: As far as I know."
Page 78. "Question: Did your wife ever tell you what she thought might have caused her cancer?
"Answer: No, sir.
"Question: Did your wife ever tell your children what she thought might have caused her cancer?
"Answer: Not to my knowledge."
Page 101. "Question: Does the church have any doctrine or teaching on cigarette smoke, the Wesleyan church?

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"Answer: I think they just consider it as kind of a nasty habit."

Page 102. "Question: Is cigarette smoke common among members of the church?

"Answer: No, sir.

"Question: Would you say it's rare among members of the Wesleyan Church?

"Answer: Yes."

Page 103. "Question: Can you ever remember being at a church function where somebody was smoking a cigarette?

"Answer: No, sir.

"Question: Was cigarette smoking prohibited at church functions?

"Answer: Yes, sir.

"Question: Was cigarette smoking prohibited in church buildings?

"Answer: Yes, sir.

"Question: Was that a prohibition that has existed as long as you can remember?

"Answer: Yes, sir.

"Question: Can you ever remember a time where you could smoke openly in a church building or a church function?

"Answer: No, sir."

Page 120. "Question: Has Mr. Craig Dunn ever told you that he has observed people smoking in the presence of your wife?

"Answer: No, sir.

"Question: Let me ask you this, Mr. Wiley: Has anybody ever told you that aside from people who worked with your wife at the VA, that they observed people smoking cigarettes in the presence of your wife?

"Answer: No, sir.

"Question: As we sit here today, can you identify for me anyplace your wife was exposed to cigarette smoke besides at her place of employment at the VA Hospital?

"Answer: No, I cannot.

Page 126. "Question: Did you ever see your brother, Mark, smoke cigarettes in front of your wife?

"Answer: No, sir.

"Question: Did your wife ever ask your brother Mark not to smoke cigarettes in her presence?

"Answer: No. He respected her enough he didn't.

"Question: Didn't what?

"Answer: Smoke in her presence.

"Question: Did he know that she -- well, strike that.

"How did he know not to smoke in her presence?

"Answer: I don't know. I didn't tell him."

Page 129. "Question: Was your father a cigarette smoker?

"Answer: No, sir.

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"Question: Was your mother a cigarette smoker?
"Answer: No, sir.
"Question: What, if anything, did your parents tell you about cigarette smoking when you were growing up?
"Answer: I guess I've always heard it's a nasty habit. That's all I can tell you.
"Question: Where did you hear that?
"Answer: My parents did.
"Question: Did they tell you it was bad for your health?
"Answer: Yes.
"Question: Did they tell you why they

thought it was bad for your health?
"Answer: No.
"Question: Did they prohibit you from smoking when you were growing up?
"Answer: They just told us it was harmful for your bodies."
Page 138. "Question: Do you know whether your wife's high school curriculum was similar to your high school curriculum?
"Answer: I think so.
"Question: Did you have a lot of the same teachers?
"Answer: Yes, sir.
"Question: I guess you didn't take the same classes in high school, did you?
"Answer: No. Because she took more science classes. She went on to be a nurse, and that was her field.
"Question: At the time you met your wife, had she already developed an interest in science?
"Answer: Yes, sir.
"Question: Did she know she wanted to be a nurse at the time you met her?
"Answer: Yes, sir."

Page 140. "Question: Was your wife throughout the time you were married the kind of person who could accomplish things that she set her mind to?
"Answer: Yes, sir.
"Question: Was she the kind of person who would be -- who was not afraid to speak up and tell people what she thought in an appropriate circumstance?
"Answer: Yes, sir.
Question: -- page 155. "Question: What did your wife do while you were working -- while you were doing that in Frankfort?
"Answer: I believe she worked in the Frankfort Hospital during that time.
"Question: As a nurse?
"Answer: Yes.
"Question: What type of nurse was she up to that point? I guess what I'm asking is was she a surgical nurse or maternity

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nurse?
"Answer: Maternity and surgery.
"Question: So she did a little bit of everything?

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"Answer: That's right.
"Question: Did she have to take any courses or supplement her education during this time period?
"Answer: No, sir.
"Question: Was she the kind of person who would read and study things on her own to kind of stay ahead?
"Answer: She went to workshops.
"Question: Even at that point in time she was interested in advancing her --
"Answer: Yes, sir.
"Question: " -- education?
"Answer: Yes, sir.
"Question: Were there workshops related to her occupation as a nurse?
"Answer: Yes, sir.
"Question: Was she typically aware of advances in science and developments in medicine while she was a nurse?
"Answer: Yes."
Page 220. "Question: Did you and your wife talk about cigarette smoking with your children as a family?
"Answer: Probably one time was all

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that was necessary.
"Question: So the answer to the question is yes, you did?
"Answer: Yes."
Page 221. "Question: Did you ever ask -- did anyone ever ask you if they could smoke in your home during the time you lived in any of those homes?
"Answer: Yes, sir.
"Question: Who was that?
"Answer: My brother. I just told him I'd rather he not.
"Question: When would that have been?
"Answer: Years ago.
"Question: That was your brother Mark?
"Answer: Yes."
Page 241. "Question: Mr. Wiley, can you identify or describe for me any brand of cigarettes smoked by any person at anytime in your wife's presence?
"Answer: You're saying name brand?
"Question: Yes. Can you name a brand of cigarettes smoked by any person at anytime in your wife's presence?
"Answer: No, sir.

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On July 20, 1994, page 7. "Question: Mr. Wiley, let me ask you a couple of other questions about some things you said yesterday. You said reading was your wife's hobby. What sort of things did she read?
"Answer: She liked to read novels,

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Christian novels. She read books concerning health. She went to workshops. Of course, she had material that she would bring home. She would read that material."

And the question is: "At nursing workshops?

"Answer: Yes, nursing workshops. I think that was a requirement of the VA, that they attend so many workshops a year and read books concerning that subject, maybe health care."

Page 8, "Did she read a newspaper each morning or each evening?

"Answer: Yes, she would read newspapers.

"Question: Which paper would she read or papers would she read?

"Answer: I believe we took the Indianapolis Star.

"Question: Was that true throughout most of your marriage?

"Answer: Yes, sir.

"Question: While you lived here in [DELETED], were there any other newspapers she read on a regular basis?

"Answer: No, sir.

"Question: What about magazines? Did you subscribe to any magazines?

"Answer: Newsweek. Of course, she subscribed to medical nursing magazines.

"Question: Besides Newsweek and the nursing magazines, did she subscribe or you subscribe to any other weekly or monthly magazines?

"Answer: It seems like sports magazines.

"Question: Would she typically read Newsweek each week?

"Answer: Certain articles, I suppose.

"Question: Would she at least glance through the article cover to cover each week?

"Answer: Yes.

"Question: Or the magazine cover to

cover each week?

"Answer: Yes.

"Question: How long did you subscribe to Newsweek?

"Answer: Over probably a ten-year span. I just don't know for sure.

"Question: Could it have been longer than that?

"Answer: It could have been shorter, too.

"Question: The whole time you lived on 10th Street, did you take Newsweek?

"Answer: Most of the time, I would say.

"Question: Any other magazines throughout your marriage that you subscribed to?

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"Answer: Reader's Digest.
"Question: When did you start taking Reader's Digest?
"Answer: During the time we lived on West 10th Street.
"How long did you take Reader's Digest?
"Answer: Four or five years.
"Question: Did she typically read or

at least glance at Reader's Digest?
"Answer: Yes.
"Question: Each month -- each week or each month, I guess it comes out?
"Answer: Month, yes.
"Question: Can you think of the names of any of the nursing or health magazines that your wife subscribed to and read each months?
"Answer: I think one of them was called RN.
"Question: RN?
"Answer: Yes.
"Question: Did she take that -- did that come out every month or every week?
"Answer: Every month.
"Question: Did she read it every month?
"Answer: Yes. And then she would take it to her office.
"Question: Was it part of her job description that she read that magazine? Was she required to read it?
"Answer: I'm not sure.
"Question: Any other nursing magazines

that she would take on a regular basis?
"Answer: I don't recall. I just -- those two different ones that would come to the house.
"Question: Which ones? The RN?
"Answer: I don't remember the name of the other.
"Question: There was another one?
"Answer: Yes. There were two coming, would come each month in the mail.
"Question: What about workshops; how many times a year would your wife attend these nursing workshops?
"Answer: It seems like she was required at least four a year, and then she would travel sometimes a distance.
"Question: Where would she go to attend these workshops?
"Answer: Sometimes she would go to Danville, Illinois, to the Veteran's Hospital there. Sometimes she would go to Ball State University, and maybe she would come to Indianapolis. It might be a hotel here but different places.
"Question: Did she attend these

workshops throughout the time she was a nurse at the VA Hospital?

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"Answer: Yes, sir.
"Question: How long would these workshops last, you know, would they be a day, a week?
"Answer: Sometimes they were a day, and sometimes they were overnight. They were two days.
"Question: Did she have to pay for this herself, or did the VA pay for her to do this?
"Answer: I believe sometimes it was out of her own expense, and sometimes it was covered by the VA.
"Question: Why would she pay out of her own expenses or pay out of her own pocket to attend these seminars?
"Answer: So she could be updated on the subjects that she was interested in.
"Question: Did she have to do this on her time, or could she do it on her VA time? Did she have to use up her vacation days to do it, or would they let her do it during work time?

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"Answer: I believe she was on their time.
Page 45. "Question: When was the first time, Mr. Wiley, that you and your wife sought a seat in a nonsmoking section of a restaurant?
"Answer: All of our married life.
"Question: Can you recall the first time you actually went to another restaurant rather than sit in a smoking section of the restaurant?
"Answer: I do not know the time that -- I can assure you the fact that we never did sit in a smoking area."
Page 47. "Question: Can you recall your wife or can you recall anything that your wife told you that she did in order to avoid exposure to smoke at the VA Hospital during the time period she worked there?
"Question: The answer, Mr. Wiley, is no? You're shaking your head?
"Answer: No, sir, I don't know."
Page 55. "Question: Mr. Wiley, how would you describe your wife's health history prior to, let's say, April of 1991?

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And let's back up. You told me about a cough your wife had in October of 1990. Before October of 1990, throughout the time you knew Mildred Wiley, how would you describe her health history, medical history?
"Answer: I would describe her health as good. I suppose she had problems like other people.
"Question: What sort of problems did she have, health problems?
"Answer: I believe there was a time she had a lump on her breast.

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"Question: Any other health problems?
"Answer: I'm sure that there was but they don't come to my mind at this time.
"Question: Aside from the lump in her breast, can you recall any other health problems your wife had during the time period you were married?
"Answer: No, sir. I can't recall at this time.
"Question: When did you discover the lump in her breast?
"Answer: I don't know the date. I'm

sorry. You probably have that information before you and I don't know.
"Question: Did she see a doctor in? Connection with that?
"Answer: Yes, sir.
"Question: Who did she see?
"Answer: I don't know, sir.
"Question: Do you recall what the diagnosis or prognosis was in relationship to that lump in her breast?
"Answer: No, sir.
"Question: Did she ever discuss with you any concerns she had about the lump in her breast?
"Answer: Yes. She was concerned.
"Question: What was the nature of her concern?
"Answer: She was concerned enough to see a doctor for help."
Page 76. "Question: Can you ever remember a day or a time period where your wife didn't want to go to work? I guess a better question is: Was she the kind of person who enjoyed going to work? Did she look forward to going to work?

"Answer: Yes."
Page 92. "Question: Did your wife get an annual physical at work as part of her employment?
"Answer: I believe there was a time period that they had to have a physical. They went for a chest X-ray, but I don't recall any more than that.
"Question: Did she get a chest X-ray on a regular basis?
"Answer: I believe that the VA required it for a number of years there. I don't know if it's still that way today or not. I just don't know."
Page 95. "Question: Do you recall whether your wife ever acted as head nurse prior to the time she became head nurse?
"Answer: I'm sure she filled in for the head nurse the day she was off.
"Question: Was that something she did on a regular basis during the time period she worked there?
"Answer: Yes, sir."
Page 114. "Question: Sir, as far as

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you know, your wife was never exposed to any

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cigarette smoke in her parents' home when she was growing up; is that correct?

"Answer: No, sir.

"Question: I know you tried to provide the answer to my question, but I think the way I posed it may have gotten the opposite question to what you think you gave me.

"Was your wife Mildred ever exposed to cigarette smoking in her parents' home when she was growing up?

"Answer: No, sir."

Page 132. "Question: I notice, sir, you told us that the patients in Building 16 that your wife worked with were considered total care patients; is that correct?

"Answer: Yes, sir.

"Question: But did your wife have a particular specialty within the field of nursing?

"Answer: I don't know if she had a specialty, but she had a desire to work with a type of patient. She stayed on in that building for the amount of time she spent at the VA. 18 years she was in that one building.

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"Question: Do you know whether there were any differences among the patient population in the different buildings at the VA Hospital?

"Answer: There were other patients that they were allowed to walk in the post, go to the canteen on their own, but like I said, her patients were total care. They stayed in that building.

"Question: Was this a matter then of your wife's choice to stay working in Building 16 with this type of patient?

"Answer: Yes. That was her choice to stay."

Page 134. "Question: Do you know if she ever requested to be reassigned to any other building in the VA Hospital?

"Answer: No, sir, I do not know.

"Question: As far as you understood your wife's job obligations, in your opinion, was a requirement of your wife's job that she keep up on health issues; is that correct, sir?

"Answer: Yes, sir.

"Question: As far as you know,

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Mr. Wiley, did your wife meet that requirement?

"Answer: As far as I knew.

"Question: I think you told us that the ways in which your wife met that requirement to keep up on health issues was to attend health workshops; is that correct?

"Answer: Yes, sir.

"Question: And also to read books that

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dealt with health-related topics?
"Answer: Yes, sir.
"Question: And also to take two subscriptions to magazines in the health field; is that correct?
"Answer: Yes, sir.
"Question: Can you think of any other way that your wife kept up on her obligation to keep up on health issues?
"Answer: She attended staff meetings there on the post."
Page 157. "Question: How did Mildred feel about being exposed to cigarette smoke?
"Answer: She didn't have a good feeling at all.
"Question: Did she like it or not like

it?
"Answer: She did not like it.
"Question: So how did she feel about cigarette smoking, breathing it, being exposed to it?
"Answer: She didn't like it, to be around cigarette smokers."
Page 161. "Can you describe for me a specific statement that you remember your wife making to you about tobacco smoke at the VA Hospital?
"Answer: No, sir."
That's all I have, Your Honor.
THE COURT: Thank you, Counselor.
We will take the afternoon break now, ladies and gentlemen. We'll break for about -- we need about 20 minutes at this point.
(Standard admonition)
MR. CASSELL: All rise.
THE COURT: All right, jury is not present. Counsel for plaintiffs received a copy of the motion to take judicial notice?
MR. PATRICK: By BAT Industries?
THE COURT: RJ Reynolds.

MR. WAGNER: Of the federal statute.
THE COURT: Federal statute.
MR. JOHN YOUNG: Yes, we did, Your Honor. We did receive that. Are you asking for what our position is on that at this time, Your Honor? It was my understanding that we were planning to file a reply, a written reply to that request, Your Honor. It's my understanding that the draft has been completed, and I would expect it to have been filed.
THE COURT: You're telling me there's an objection to that?
MR. JOHN YOUNG: Yes, sir.
THE COURT: What's the purpose of the offer, Mr. Wagner? It's your motion.
MR. WAGNER: Your Honor, it's a part -- first of all, this, of course, is a federal law that we're asking the Court take

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judicial notice of, not an Indiana state law, and it's relevant to the standard of care that federal agencies were required to maintain under the statute which would include the Veteran's Administration

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Hospital, which in turn gets us into the duty of the Veteran's Administration Hospital to maintain a healthful workplace and that in turn plays into the instructions that we will be tendering, if we haven't already tendered to the Court.

THE COURT: It's Section 668. What part of the section do you want to publish to the jury, Counselor? First paragraph?

MR. WAGNER: Your Honor, I don't think it's necessary, really, that we publish this to the jury, because we're going to incorporate, if Your Honor approves the instruction, we're going to incorporate so much of the statute to the instruction that we'll be tendering to the Court on the duty of the Veteran's Administration Hospital.

THE COURT: All right.

MR. JOHN YOUNG: As a practical matter, Your Honor, if the defendants are not going to be reading this to the jury, I don't see the point of asking to take judicial notice. This is an issue that will be argued when the final instructions are

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submitted, the law is either appropriate given the facts of this case or it is not. A judicial notice at this point of the proceeding, we believe, would be inappropriate.

THE COURT: Why would I take judicial notice then if he's correct, then, Mr. Wagner? If this is just an instruction issue? On the other matter I took judicial notice was life expectancy, I recall.

MR. WAGNER: Right.

THE COURT: And I did tell the jury immediately at that point.

MR. WAGNER: Which was a fact matter as opposed to a law matter.

THE COURT: Right. Well, there's a fact issue as to whether or not the statute exists. You agree?

MR. WAGNER: This statute?

THE COURT: Yes. You're asking that I tell the jury there's no issue -- there's no fact issue, that this statute is in existence and was in existence at the relevant time. Why wouldn't I tell them now if I took judicial notice?

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MR. WAGNER: Well, actually, Your Honor, now that I think about it, that probably would be something to do.

THE COURT: And if I do, I don't need to tell them the whole section here,

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that was my question.
MR. WAGNER: No. I think that as far as 668 is concerned, it would be subparagraph 1.
THE COURT: Right.
MR. WAGNER: And subparagraph 2.
THE COURT: All right. And none of the rest of the statute then?
MR. WAGNER: And then -- and that's it, I think, Your Honor. I think the reason the other one is there because it carries over to the top of the page.
THE COURT: Right. That's what I thought.
Now, the plaintiffs have an objection to that?
MR. JOHN YOUNG: It's a written objection, Your Honor, and I was not privy to actually drafting that response. I'm hoping that it will be forthcoming before

the end of this break.
THE COURT: All right. Now is the time.
MR. JOHN YOUNG: Yes, sir.
THE COURT: I will be back in 15 minutes, and I'll take a look at it before we bring the jury in.
MR. JOHN YOUNG: Your Honor, one point from the plaintiffs' point of view if I might.
THE COURT: Yes.
MR. JOHN YOUNG: Had you made plans for the reading of the plaintiffs' designated parts of the deposition of Philip Wiley in response to the designations made by the defendant?
THE COURT: When do you want -- when did you want to do that? During your rebuttal case?
MR. JOHN YOUNG: Well, I thought that it was appropriate to do it in response to the reading of the deposition filed, or read on behalf of the defendants.
MR. OHLEMEYER: Your Honor, I'm a little confused, if they had 106, I mean, if

they had 106 issues, I don't think they have a right to read his deposition because we have the right. The rule talks about use by an adverse party. If there were 106 issues, I would have been happy to have dealt with them.
THE COURT: I didn't realize there were any completeness issues.
MR. JOHN YOUNG: Yes. We had filed originally on February 9th, Your Honor, our counter-designations to the designations of the defendants. The defendants then, also, they had filed their pared down designations, and in response to their pared down designations, we had incorporated our general objection, our specific objections,

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and our counter-designations.
THE COURT: Well, actually, Counselor, you should have brought that to my attention before Mr. Ohlemeyer began to read.
MR. JOHN YOUNG: I'm sorry, Your Honor, I just assumed because it had been filed that that was something that we were just going to go right into the progression,

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that we would read after Mr. Ohlemeyer.
THE COURT: And the defense objects to that?
This is not a completeness issue; right?
MR. JOHN YOUNG: It is, Your Honor. And it is, the objections -- this is a matter that has been filed with this Court since February 9th and never has there been an objection to the designations filed by the plaintiff forthcoming from the defendants. We had no reason to believe that they would object to our designations because they heretofore have not said anything. And we believe that for the exact reasons that the defendants would like to have read the portions of the deposition to the jury from Mr. Wiley's testimony, we believe that our designations shed light or make complete those statements that were read to the jury. So I do believe that it is a completeness, or excuse me, we believe that it is a completeness issue.
MR. WAGNER: Shouldn't it all have been read to the jury, then, Your Honor, at

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the same time Mr. Ohlemeyer read?
THE COURT: That's my point.
MR. WAGNER: Yes, I know it is. I mean --
MR. MOTLEY: Judge, we can read it. I mean, I don't mean to --
THE COURT: You can also call Mr. Wiley back in your rebuttal case.
MR. MOTLEY: That's what I was going to invite Your Honor's attention, that I can just put Mr. Wiley on the witness stand.
THE COURT: I'm not going to permit the reading by plaintiff of his deposition. Make a long story short.
On another matter, defendants had asked the Court to reconsider a trial ruling on a civil conspiracy, and essentially this is a motion to dismiss the plaintiffs' conspiracy theory. Court will decline that invitation, deny that motion.
There was a request concerning plaintiffs' judicial admissions. Likewise, I don't think that motion is well taken, Mr. Reynolds. I'm going to order that

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denied.

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There was also a motion in limine to preclude the testimony of Michael Cummings, based on the fact that apparently Mr. Cummings was called as a witness whom we really didn't discuss this particular witness on Friday. He is a fill-in witness, I understand.

MR. MOTLEY: Your Honor, he was discussed on Friday.

THE COURT: Who was the --

MR. MOTLEY: Your Honor, there were three witnesses. He was the third. Dr. Garfinkel fell over the weekend and injured his back and was not able to come.

Dr. Cummings was listed on three points, we -- you said he could go on two but not the third. We then called, over the weekend, we called somebody on the defense side and told them, I think we talked to Mr. Furr.

MR. FURR: Me, yes.

MR. MOTLEY: And told Mr. Furr that Dr. Garfinkel had unfortunately and unexpectedly hurt his back to the point

where he couldn't travel, and that we would be seeking to have Dr. Cummings, who is also an epidemiologist, fill in for Dr. Garfinkel's testimony in regard to those areas that were not personal to Dr. Garfinkel.

Your Honor may recall Dr. Garfinkel had some anecdotal, factual stuff that was relevant. He obviously doesn't know about that, so that he would fill in on the generic issue that Your Honor said we could do with Dr. Garfinkel.

The defendants deposed him for several hours last night. We didn't -- I don't believe we -- I don't know how many hours, but I think it was over two. And we told them that he would not testify. He, Cummings, would not testify about any Garfinkel anecdotal personal experiences, obviously, since he's not Dr. Garfinkel, but that we would offer him on the generic issue that Your Honor permitted Dr. Garfinkel to talk about with respect to ETS epidemiology, specifically with respect to Dr. Levy.

If Your Honor will recall, I don't want

to rehash all those areas now that we did --

THE COURT: I do recall now.

MR. MOTLEY: That's who Dr. Cummings is. So Dr. Cummings is Dr. Cummings, and he's also standing in the shoes of Dr. Garfinkel with respect to those matters that Your Honor permitted him to, you said, Garfinkel could testify about.

THE COURT: All right.

MR. FURR: May I?

THE COURT: Mr. Furr?

MR. FURR: Yes, Your Honor. I'm

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sorry that Mr. Garfinkel hurt his back over the weekend, but that doesn't help me very much. When we left here on Friday, we set about preparing to examine Mr. Garfinkel on his disclosure and Dr. Cummings on the items in his disclosure that you permitted, and we had people scurrying around from Winston-Salem to Cleveland trying to collate the materials that we would need to formulate that examination.

I got a call yesterday at 11:30 a.m. from Ms. Vroon -- I don't see her in her now -- but she informed me that there was a

problem with Mr. Garfinkel and that he wasn't going to be able to attend and they were contemplating asking Dr. Cummings to address the issues that Mr. Garfinkel was going to address, but that she couldn't tell me whether he was going to or not because they hadn't spoken to him about it.

So we attempted to begin preparing for Dr. Cummings in that regard. But it was Sunday, and it was a little too late to gather the types of information and materials that I would need to examine Dr. Cummings on the epidemiology issues.

I called them at 7:00 and asked them if they had made a decision and they had not made one yet. So we postponed the deposition until 8:15 last night. We did depose him for a couple hours including some time on the epidemiology issues. But I have to submit, Your Honor, in fairness we haven't really had an opportunity to prepare to meet Dr. Cummings' views of the epidemiology.

The second grounds for our objection is that Mr. Garfinkel was approved as a

rebuttal witness to address the issues contained in his disclosure statement. Those issues were drafted and addressed largely, very specific areas of Dr. Levy's testimony. As the excerpts to the deposition we took last night demonstrate, Dr. Cummings is not prepared to address any Levy-specific issues. He doesn't know anything about Dr. Levy, he doesn't know anything about meta-analysis, he has no views as to whether or not Dr. Levy's testimony was proper or not. And as counsel represented last night, what they want to bring him in is to address general epidemiology issues now.

I submit, Your Honor, that that's not proper rebuttal testimony, general epidemiology issues. We've had so many witnesses talk about that from the plaintiffs, Dr. Burns talked about it, I know a number of their witnesses talked about it. That's a crucial element of their case in chief, and I just submit that's

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really not a proper subject for rebuttal, and that we haven't had a fair opportunity

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to meet that evidence and a full-blown cross-examination on the epidemiologic issues involved could take several hours and I don't think any of us want to do that this afternoon.

MR. MOTLEY: Your Honor, may I respond to this? First of all, it would have been improper for us to sit down, according to your sequestration order and go down chapter and verse with Dr. Levy, and let him go over the transcripts.

MR. FURR: He knows that's not what I mean, Your Honor.

MR. MOTLEY: I think if I had done that, he would have been up here saying he knows too much about what Dr. Levy will say.

It's my intention to ask him to assume that there was an epidemiologist from the defendants who said a one-tail, for example, test is inappropriate to use, is that in accord with your views as an epidemiologist.

With respect to the -- may I approach, Your Honor?

THE COURT: Yes.

MR. MOTLEY: This is all we're

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going to have him testify to that, if I might use blue.

THE COURT: I think I may have that.

MR. MOTLEY: Yes, sir, I was just going to underline what Ms. Vroon told me she told Mr. Furr, and I've seen Mr. Furr's talents, Your Honor. I don't think you need to get prepared this weekend specific to Mr. Cummings.

MR. FURR: I'm not unfamiliar with some of these issues.

THE COURT: I know that.

MR. FURR: But I wanted an opportunity to prepare to meet an expert, Your Honor.

MR. MOTLEY: Well, we did tell him at 11:30 Sunday, Judge. We didn't find out until 10:00 Sunday morning.

Here in blue, here are all the things you said Garfinkel was a fair rebuttal. And we substituted as soon as we found out he got hurt. These blue line areas are all I'm talking about. Nothing dealing with that, just these, generic issues specific to Levy,

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that which you already said Garfinkel could testify to. They did have him for two hours last night on that. And I'm still going to get finished in an hour.

MR. FURR: And as Your Honor saw from the deposition excerpt that's attached, he's not prepared to address this. He's never done a meta-analysis, he doesn't know

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how to do a meta-analysis, he doesn't know what models would be used to conduct a meta-analysis. What he's being called to --

Q Are you a consultant to the National Cancer Institute, which I think everyone in this courtroom has heard of, tobacco control program?

A Yes, I am. I currently serve on their committee evaluating their state-based tobacco program. I've also received a number of grants from the National Cancer Institute.

Q Have you conducted original research yourself on the health effects of smoking,

including an evaluation of environmental tobacco smoke?

A Yes. I've conducted a number of studies. Most of my etiologic studies have focussed on the health effects of passive smoking on children, but I also received a grant in the mid-1980s to study measurement of passive smoke.

Q Now, you didn't do those studies just to come here and testify this afternoon, did you?

A No, I didn't.

Q Over what period of time have you been doing those?

A I've been working at Roswell Park for 17 years and during most of my period of time at Roswell Park has been devoted to studies on tobacco use, since it's a major cause of the reason that patients that are in our hospital.

Q Dr. Cummings, you're a Ph.D. doctor, not a medical doctor.

A That's correct.

Q But you are an epidemiologist.

A That's right. That's what I do at Roswell

Park currently.

Q Doctor, are there studies reported in the medical literature which you believe are valid which demonstrate that some workplaces where nonsmokers might be are smokier than others?

A Yes, there are many studies that have been done where investigators have actually measured the amount of tobacco smoke, nicotine, carbon monoxide, particulate matter in the air in workplaces and bingo facilities, bars, a whole variety of places. All those places, of course, include places that people work. And show that it can get pretty smokey. These are summarized in the Environmental Protection Agency report.

Q And you worked on the EPA report on passive smoking that came out in December of '92?

A I contributed data from my study on measurement of passive smoke to that group.

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I also testified to the Scientific Advisory Committee.

Q So you participated in the process?

A That's correct.

Q Now, Doctor, in 1992, the jury has already

heard the EPA concluded that secondhand smoke was a cause of lung cancer. Do you agree with that?

A Yes, I do.

Q What is a Class A human carcinogen, sir?

A Class A human carcinogen is the highest category of risk that the EPA assigns to chemical constituents that it evaluates for risk status.

Q Is secondhand smoke a Class A human carcinogen?

A Yes.

Q Since the EPA report of 1992, have there been other studies such as the California study?

A Yes. There is a report that came out last year from the California Environmental Protection Agency that reached the same conclusion.

Q In 1997?

A That's correct.

Q While we've been going on in this trial, was there an additional report that came out of the United Kingdom?

A Yes, there was a report that was just issued

last week by a group, independent group of scientists in the United Kingdom that reached exactly the same conclusion as the Environmental Protection Agency report in the U.S. and also Cal EPA.

Q Between the 1992 report and the United Kingdom report that just came out last week, have there been studies of groups of people exposed to secondhand smoke?

A Yes, there are. And seems to be an active area of research and there are additional studies that get published, and they basically have strengthened the association that was originally drawn back in 1986 with the U.S. Surgeon General's Report, the National Research Council report, and then subsequently the U.S. Environmental Protection Agency report. They've all drawn the same conclusion; that exposure to environmental tobacco smoke or secondhand smoke causes lung cancer.

Q Doctor, how many different studies are there out there that have been done, epidemiological studies that have been done on secondhand smoke and lung cancer?

A Well, the --

Q As of we sitting here today.

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A The latest report, the British report, they looked at 37 studies.
Q Different studies?
A 37 different studies. And actually they did a -- published a summary of these in the British Medical Journal that came out this summer. It was a very nice analysis that was done. And many of them are case control designs; there are also four cohort studies in that group.
Q How many of the 37 were positive, that is, showed a relationship between secondhand smoke and cancer?
A 31.
Q 31 of 37?
A That's correct.
Q Just on the basis of chance, how many -- what would be the odds of those 31 positive versus either no effect or six negative being just happenstance or chance?
A Simply due to chance?
Q Yes.
A I would say less than one in 10,000.

Q So what does that tell you, sir, about whether or not the evidence is sound or not sound about secondhand smoke causing lung cancer?
A Well, that evidence is sound. And additionally, the reports, including the EPA report that was done also looked at dose-response relationship. In other words, some of these studies actually characterized the amount of exposure that people had to secondhand smoke and correlated that with the risk you would expect to see, a higher proportion of cases of lung cancer in those that have the highest exposure.
And in fact, when you look at those studies, particularly, they also show a very high relationship between secondhand smoke and lung cancer risk. In other words, the dose response, which is one of the criteria that we would look for in an epidemiologic study for the relationship between an exposure and disease risk.
Q Dr. Cummings, what is a consensus opinion?
A Well, my opinion is a consensus opinion is when most people, the majority of people,

and when we do this in science, the majority of the scientists or the medical profession agree with a conclusion. For example, the conclusion that environmental tobacco smoke leads to lung cancer.
Q Is the -- what is the greater weight of evidence, Doctor, taking the totality of all the studies that have been done, what is the greater weight or preponderance -- do you understand what preponderance means?
A Yes.

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Q Preponderance of the evidence as to whether or not secondhand smoke is a cause of lung cancer in nonsmokers?
A A preponderance of evidence is that it does cause lung cancer in an otherwise healthy nonsmoker. And that's the conclusion that's been reached by every medical public health organization that I'm aware of; the American Medical Association, the British Medical Association, the American Public Health Association, various government agencies, such as NIOSH, EPA. This latest group from the UK, the World Health Organization, the list goes on. That's a consensus, in my

opinion.
Q Now, I know you can't read my writing, but over 50 percent is possibility, over 50 percent medical probability, 95 percent is medically conclusive, 99 percent is medically certainty. I want you to assume that there was that kind of testimony given here today, that those were the levels of causation. Have you ever heard of that before?
A No.
MR. FURR: Objection, Your Honor. Excuse me. This is beyond the scope of any disclosure.
MR. MOTLEY: Your Honor --
THE COURT: I didn't hear the objection.
MR. FURR: This is beyond the scope of any disclosure that we discussed during the break, Your Honor.
MR. MOTLEY: No, sir, Your Honor. This goes straight to the general causation that you asked me about. I am asking him -- I'm not asking him specifically what Dr. Levy taught.

THE COURT: He may answer.
BY MR. MOTLEY:
Q Have you ever heard of anything like that?
A No, I haven't. In fact, I think it would be ludicrous if you used that. If you used those same criteria, we wouldn't have a lot of the chemotherapy drugs that we have available to treat cancer patients today, because basically the studies that are used to evaluate almost everything in medical science and epidemiology is based on weight of evidence. We don't rely on a single study, any probability. We look at the weight of studies that are available. Consistency of studies is one of the classic criteria that's used to evaluate epidemiologic research and medical research in general.
Q Doctor, have there been studies where autopsy results have been used to confirm

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whether secondhand smoke causes lung cancer?
A Yes, there have been. Autopsy results were looked at in a Greek study by Trichopolous, I believe, published in the Journal of the American Medical Association, and, of

course, autopsy studies were used years ago by a Dr. Auerbach to establish the link between active smoking and lung cancer.
Q Turning to another subject, Doctor. Have you looked at smoking prevalence rates in United States Veterans?
A Yes, I have.
Q Do you have personal experience as a cancer researcher working in hospitals?
A I have a lot of experience working in all kinds of different hospitals, our cancer hospital, of course, and I've worked with a number of the hospitals in New York state on a variety of topics, mainly related to smoking cessation.
Q Well, if you're working on smoking cessation, there obviously was people there smoking; right?
A That's why they usually asked me to come in, so they could figure out how to help those people quit smoking.
Q Have you observed conditions in veterans before 1986?
A Yes, I have.
Q And did you observe whether or not there

were veteran patients who smoked?
A There are a lot of veterans who smoke. In fact, a colleague of mine, Dick Strecker, who also went to the University of Michigan, did his Ph.D. dissertation on helping veterans to quit smoking, designing a quit smoking program. It was quite a challenge, because there were high rates of smoking among the veterans.
Q When you say high rates of smoking among veterans, what do you mean?
A Generally you find that the rates are about 10 to 20 percent higher on average from my look at the various rates of smoking among the veterans. Of course, there haven't been a lot -- these are all fairly recent surveys that have been done because a lot of the older surveys of the U.S. population, of course, excluded military personnel when they did the surveys. They would select the non-military people to be participating in the only civilian population in the surveys.
Q Now, Doctor, have you also looked as part of your work on advertising and promotion? Do you remember you said that to the jury?

Bottom line, Doctor, have you looked at any efforts or are there, demonstrated to your

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scientific satisfaction, any efforts of the cigarette companies to target the military as a source of sales of cigarettes?

A Well, my look at the evidence is that cigarette marketing certainly increases the likelihood that people are going to smoke. This is the conclusion that we reached with our Institute of Medicine report. That the weight of evidence, when you look at all the studies on marketing to children, it showed us that there was good reason to conclude that cigarette marketing practices contribute to an increase in smoking among young people.

The same, I think, can be said of other target groups. Women, veterans, and I have examined some of the advertising material aimed specifically at people in the military.

In fact, if you look at some of the marketing that goes on, giveaways of free cartons of cigarettes, which is a fairly common practice; the availability of

cigarettes in K-rations, in lunch boxes at VA hospitals, advertisements on television before cigarette advertising was banned on TV, there were many ads that talked about giving cartons of cigarettes to U.S. Veterans Hospitals as part of the promotions on TV shows. Many of the advertisements in magazines were in military publications.

I think all these things contribute to a likelihood that, in fact, there was going to be a high rate of smoking. In fact, you can look at some of the old Army manuals and there was one article I came across published in the New York State Journal of Medicine that actually talked about that if you wanted to take a break in the service, you had to take a smoke break. That's the way it was written in the Army manual. So it seems like tobacco has been part of the military for a long time. And the result of that has been very high rates of smoking among people in the military.

Q Two more subjects and then I'll be done, Doctor.

Have you reviewed documents with

respect to the cigarette industry's attempts to influence Veteran's Administration smoking policies?

A Yes, I have.

Q And what have you looked at?

A I've seen some documents that talked about actually --

MR. FURR: Objection, Your Honor. This is clearly beyond the scope of Item No. 1 of the Doctor's disclosure.

MR. MOTLEY: Excuse me, Your Honor,

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if I could find that.
May I approach, Your Honor?
THE COURT: Yes.
(Bench discussion)
THE COURT: Go ahead, Mr. Motley.
Q Doctor, have you reviewed documents with respect to the cigarette industry's attempts to influence VA smoking policies?
A Yes, I have.
Q And have you formed an opinion as a result of that?
A Yes, I have.
Q And what is that opinion, sir?
A I think it's outrageous, quite frankly, some

of the things that I read.
MR. WAGNER: Objection, Your Honor.
Q Don't use the word "outrageous." Just tell us what you saw.
A All right. I saw one document, a letter, sent from Mr. Cullman from the Tobacco Institute to the Surgeon General of the Navy, I believe.
MR. WAGNER: We'll object, Your Honor, to the witness testifying to hearsay.
THE COURT: Sustained.
MR. MOTLEY: These documents are in evidence, Your Honor.
THE COURT: I don't know that from what you're saying right now.
MR. MOTLEY: I'm representing to Your Honor that they're in evidence. And in order to not belabor this, since we've got to make arguments in the morning, I just cut to the chase. But these documents are in evidence, and I can get you the exhibit numbers if you'd like, Your Honor.
MR. OHLEMEYER: If they're in evidence, how could this be proper rebuttal?
MR. MOTLEY: He's giving an opinion

based on something that's in evidence. Opinions weren't given as to the documents standing alone in our case in chief.
MR. OHLEMEYER: That's not proper rebuttal, Your Honor, and I object to it.
THE COURT: Last objection is overruled.
What's the exhibit number; do you know?
MR. MOTLEY: 50186.
THE COURT: All right. On Counsel's representation, ask your question again, Counsel.
BY MR. MOTLEY:
Q Do you have 50186 there?
A I don't, but I have another one. There are actually several that I've seen.
Q Give me the number of the one you've got and let me make sure it's in evidence.
MR. MOTLEY: The right number is 5153, not 50186. Do you have that over

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there?
THE COURT: That's in evidence.
Q Just restrict yourself to that document.
A Okay. This is a document dated October 16, 1962. It's a letter from Mr. Cullman, who

is the head of the Tobacco Institute, and it's addressed to General Bohannon, who is the Surgeon General of the Air Force.
And basically it's talking about, this is a follow-up to our telephone conversation with reference to the suspension of the long-established practice concerning the distribution of cigarettes to U.S. Air Force hospitals and in lunch kits. And it's basically talking about, I guess, the Surgeon General was considering discontinuing that practice. This is in a letter to try to continue this long-standing practice.
It goes on, by the way, to point out the reason for this. More to the point, the fact that many complex scientific questions about lung cancer causation are still unsettled.
This is probably in advance of the 1964 Surgeon General's Report. This is one of the earlier documents that I've seen, but basically contributing to want to give out free cigarettes, be able to distribute the free cigarettes and cartons of cigarettes at

VA hospitals in their lunch kits.
Q Doctor, I want to now turn to one last subject, and that is the subject of databases for biomolecular markers, and specifically the jury has heard a lot about P53, codon 157.
Now, how does one -- if one really was wanting to find out about codon 157 and P53 and hot spots and stuff like that, G to T transversions, without getting into what they say, can you tell us how one, if you were interested and had access to a computer, how could you find it?
MR. FURR: Excuse me, Doctor. Objection, Your Honor. There is no foundation for his testimony, and I'd like to voir dire the witness to demonstrate that he has no expertise in this area.
MR. MOTLEY: I'm not asking him the merits of it. I'm asking him how one goes about just getting access to look at something, have it in your hand and look at it.
MR. FURR: That's the nature of my objection. He has no expertise in examining

this database.
MR. MOTLEY: I didn't ask him to

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examine the database. I asked him how one would access it. If I get to that point, then maybe we can do foundational stuff.

THE COURT: That objection is overruled. Go ahead.

BY MR. MOTLEY:

Q How can you get the stuff off the computer, Doctor?

A It's fairly simple. If you have access to the Internet, you can use a search engine, I used the search Medic-Crawler. I typed in the word P53. I came up with some 30 different hits. The database is actually listed among one of those hits. It says P53 database. It's maintained at web site www.iarc, I-A-R-C, dot farc, as this is actually located in France, \P53 home page.

And if you go into that database, you can actually, it explains what the database contains, and it's basically from the public literature -- published literature, excuse me, on P53, which is quite extensive, all the mutations that have been identified with

P53. And obviously this is a continually growing database as more evidence comes out about P53 in the mutations.

You can click on the actual database, and you get a list of the 8,300 or some odd different mutations that have been identified.

And then you can search according to codon 157 or various changes, such as G to T transference, and you can also search by a whole variety of other factors, like by site of disease, lung cancer, pancreatic cancer.

Q Did you do all that?

A Yes, I did.

Q And you got it with you?

A I brought along the analysis I did on pancreatic cancer. It took me about five minutes on the computer to do this. I think my 13-year-old son probably could have done it a little bit quicker. He's a little bit better with the computer than I am.

MR. MOTLEY: Your Honor, I would like to mark this as the next exhibit, just for demonstrative.

THE COURT: All right. 122.

Q Doctor, can you tell me whether there was any, in the 8,300 in the database, was there a single case of pancreatic cancer that you found on the computer?

MR. FURR: Excuse me, Doctor. Now I'd object, Your Honor. I would like to voir dire this witness to demonstrate he has no expertise in conducting these analyses or interpreting these data.

Q All he's got to do is look at the list.

MR. FURR: This is merely a

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recitation of hearsay.
THE COURT: I will sustain the objection at this point. You can go into foundation.
Q Now, Doctor, how can -- if I were to ask you the question, could your 13-year-old boy look at this and tell me whether there was a case of pancreatic cancer that was listed here at codon 157 G to T for P53, could he find it?
MR. FURR: Objection. Relevance.
A Yes, he could.
MR. MOTLEY: Your Honor, now it's no longer a matter that he even needs expert

interpretation. Anybody can look at the list and find it on here or not find it on here. We didn't need to get a microbiologist.
MR. OHLEMEYER: Your Honor, Mr. Motley is going to get six hours to argue tomorrow.
THE COURT: Objection is sustained.
MR. MOTLEY: And I'm not going to get six hours tomorrow, either, Judge. It's over two days.
Your Honor, I have no further questions.
Q Except let me ask Dr. Cummings, do you intend to charge us for your time?
A Yes.
Q You haven't spent 300 hours on this, have you?
A No. I really just spent today and basically about a day before that preparing for this.
MR. MOTLEY: Thank you, sir.
THE COURT: Cross-examination, Mr. Furr?
MR. FURR: Yes, I do, Your Honor.

CROSS-EXAMINATION
BY MR. FURR:
Q It's not as bad as it looks, Doctor. I'll be brief.
Dr. Cummings, you just got involved in this case very recently, didn't you?
A I got a call on Thursday.
Q You were contacted by Jodi Flowers, who is sitting here at the plaintiffs' table, and she asked you to serve as a rebuttal witness in this case; is that correct?
A That's correct.
Q And I think you know the defendants were first told that you were going to be a witness in this case on Friday.
A I don't know that.
Q You and I met last night at about 8:00 p.m. or a little shortly thereafter; is that right?
A That's right.

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Q And that was the first opportunity that the defendants had to talk to you with respect to what your opinions would be in this case; isn't that correct?
A With regards to this case. I've been

deposed many other times for other cases on tobacco.
Q We're going to talk about that.
You can't see that, can you, Doctor?
A I cannot see it at all.
Q Doctor, I've written on the board the phrase "The war on tobacco." That is a phrase that you've used before, isn't it, sir?
A That's correct.
Q In fact, you consider yourself to be involved in a war on tobacco; correct?
A I had an article that I used "The War on Tobacco" as part of the title.
Q In fact, in 1994, you published an article in the journal Cancer titled, "Involving Older Americans in the War on Tobacco."
A That's correct.
Q Are you a recruiter in that war, Doctor?
A Yes, I am.
Q I think you said you are charging Mr. Motley for your time here, didn't you?
A That's correct.
Q And last night as we took your deposition, I believe you were charging $300 per hour; is that right?

A For deposition time. $400 per day for travel or any other time outside the deposition.
Q What rate are you charging today?
A $400 a day.
Q $400 a day?
A Yes. This isn't a deposition.
Q Are you charging less for trial testimony than deposition?
A I'm pretty noviced at this. Maybe I should be charging more.
Q You are giving Mr. Motley too good a deal. I can promise you.
Now, you mention that you've been deposed a number of times a few minutes ago, didn't you?
A It's now up to six as of last night.
Q And that's because you're very active these days in the war on tobacco and, specifically, litigation against cigarette manufacturers, aren't you?
A I think it's because I'm considered an expert in the area of tobacco epidemiology.
Q And you're very active in litigation against cigarette manufacturers, aren't you, Doctor?

A I've been involved in it.
Q And you're involved in other cases for

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Mr. Motley and his firm, aren't you?
A That's correct.
Q You worked with Mr. Motley, his law firm in a case against the cigarette manufacturers in Texas; correct?
A That's right.
Q I believe you also worked with Mr. Motley in a case against the cigarette manufacturers in Florida?
A That's correct.
Q You worked with some different plaintiffs' lawyers in cases against the cigarette companies in Mississippi?
A That's right.
Q You have been named as a witness in the Engle case in Florida?
A That's right.
Q You testified as a witness in the Broin case in Florida?
A That's right.
Q You've been named as an expert in the Washington case against cigarette manufacturers.

A That's correct.
Q You've been named as a witness in the Arch case in Pennsylvania.
A That's correct.
Q In fact, I believe last night you told me that you've been named in so many cases that it's hard for you to keep track of them; that's right?
A There are a lot of cases, yes.
Q In addition to testifying against cigarette companies, you're active on other fronts in this war against tobacco, aren't you?
A I run stop smoking clinics. I do a fair amount of lecturing to both health professionals, the public, and quite a bit to school children. I basically represent our institution. When the topic of tobacco comes up, I'm the person they call for comment.
Q You consider yourself to be a tobacco control advocate; isn't that correct?
A Well, I'm certainly an advocate of controlling tobacco use, yes.
Q You've agreed in the past that you're a tobacco control advocate, haven't you?

A Sure. I work at a cancer hospital. You can hardly not be one.
Q You are a member of a group called Action on Smoking and Health; is that correct?
A I certainly support that organization. I'm not sure if you're a member of it.
Q You go around the country doing presentations and slide shows regarding -- that advocate tobacco control, don't you?
A I do a lot of presentations, as I described, to mostly people in our area, in the

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[DELETED] area where I live on all aspects of cigarette use, mainly to basically explain the relationship between tobacco use and disease. Which is pretty well established.

Q Those presentations also address issues like advertising by the tobacco industry, don't they?

A Some of my presentations have dealt with advertising.

Q In fact, a component of this marketing promotion that you talked about today is advertising; is that correct?

A Yes.

Q Let's be very clear here, Dr. Cummings. You do not consider yourself to be an expert in advertising, do you?

A I'm an expert in health behavior. That was my training. And epidemiology, since I've been teaching it for the last 15 years.

Q My question to you, sir, is you do not consider yourself to be an expert in advertising, do you?

A I wouldn't consider myself an advertising expert.

Q You've also attended strategy conferences put on by lawyers suing tobacco companies, haven't you?

A Excuse me.

Q You've attended strategy conferences put on by lawyers suing tobacco companies, and I'm specifically referring to Professor Daynard's conference?

A As far as I know, Professor Daynard isn't suing the tobacco companies, but he did have a conference a number of years ago that I attended.

Q And that conference involved lawyers suing the tobacco companies?

A It did talk about some of the litigation that was going on at the time.

Q Let's be very clear about something else, Doctor. You are, in fact, opposed, and would like to see the sale of cigarettes in this country banned, wouldn't you?

A I don't think it's very reasonable to ban the sale of cigarettes. I'd like to see, quite frankly, the diseases that are caused by cigarettes discontinue. That's really the thing that I'm concerned about.

Q Doctor, isn't it a fact that you oppose the sale of cigarettes in this country?

A What do you mean oppose? I haven't gotten out in front of my convenience store and said stop selling cigarettes.

Q Doctor, is it your testimony that you don't know what the word oppose means?

A Well, I haven't officially opposed the sale of cigarettes, because I have actually

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stated publicly that I don't believe that it's possible to ban the sale of tobacco products. You can grow tobacco, quite frankly, in your backyard if you needed to, so it would be really fruitless to try to

ban tobacco. I basically have spent most of my time encouraging people to educate others about the dangers of tobacco, and I've done a lot of that myself.

Q Doctor, you would like to see the cigarettes not -- excuse me, the cigarette manufacturers rendered not able to sell cigarettes, wouldn't you?

A No. Because I don't think that's a very viable goal.

Q Okay. Doctor, one of -- the Mississippi case that you worked on is known as the Moore case, isn't it?

A That's correct.

Q Page 49, lines 13 through 16. You were deposed in the Moore case, weren't you?

A I was.

MR. FURR: May I approach, Your Honor?

THE COURT: Yes.

Q Is that a copy of your deposition, Doctor?

A It appears to be. I haven't seen it in quite some time.

Q Take a look at page 49, lines 14 through 16, and I'll ask you a question about it.

A Okay.

Q Okay. In the Moore case when you were deposed, Doctor, were you asked the question, or excuse me, did you provide the answer, "Am I against companies selling cigarettes?

"Are you against that?" and you answered yes?

A That's correct.

Q Does that refresh your recollection?

A Yes. I still think that while I might be against companies selling cigarettes, that the fact of the matter is I don't foresee that as a very likely possibility for the reasons I stated.

Q At bottom you're basically a prohibitionist with respect to cigarettes, aren't you?

A I'm a prohibitionist with regards to cancer, heart disease, and emphysema caused by smoking.

Q Doctor, you also believe that employers should have the right to discriminate against smokers and deny smokers employment opportunities based on smoking status, don't you?

A Actually, my opinion on that has changed over time. Originally, I thought that

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employers ought to have that right, quite frankly, to make their own decisions as who they are going to hire and who they are not going to hire, and smoking status might be one of the criteria that they would utilize, because of the higher costs and concerns about having a smoker.

But, quite frankly, in fact, I've just written a piece that talked about the fact that smokers are really victims, and many smokers find it impossible to discontinue smoking. And those two things would be in conflict.

And, in fact, I have done a research recently on a smoking booth where smokers who choose to smoke can go as long as the booth would -- basically, we were testing the efficacy of this booth as preventing exposure to secondhand smoke in the people in the surrounding area to see whether that booth would work.

Q Let's be clear, Doctor, again. In the past, it was your opinion that employers ought to

have the right to discriminate against smokers with respect to employment opportunities, and you published those views, didn't you?

A I may have. I explained my opinion.

Q Your opinion has changed?

A Yes.

Q Now, in the past, it was also your view that employers ought to have the right to discriminate against smoking employees and preferentially promote nonsmokers; is that correct?

A I think employers certainly have the right to require and maintain a smoke-free facility. I mean, they have the obligation, quite frankly, to make sure that the facility is smoke free.

Q Okay. And in the past, did you not write that employers ought to have the right to preferentially discriminate against smokers and to provide preferential promotions to nonsmokers over more qualified smokers?

A I may have said that in the past, but I don't agree with that opinion today, as I've explained.

Q Dr. Cummings, you don't have any educational background in the field of advertising, do you?

MR. MOTLEY: Your Honor, he asked him that earlier.

MR. FURR: No. I asked him whether he considered himself to be an expert in the field of advertising.

THE COURT: He can answer that.

A No. I've spent a fair amount of time studying health behavior, and part of health

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behavior is obviously trying to change people's health behavior. And if you think of advertising as one of the tactics that's used to try to educate people about the dangers of smoking, or other variety -- wearing seat belts or a variety of other things, I have certainly studied that literature extensively. I teach a course on the study of health behavior, I've done so in the past 15 years. And we have a section of that course that I teach that is devoted to health promotion advertising.

Q You have no degree in the field of advertising?

A I don't have a degree in advertising.

Q And you don't belong to any professional or academic organizations in the field of marketing or advertising, do you?

A No, I don't.

Q You testified today that cigarette companies have targeted military personnel with their marketing and promotions; is that correct?

A That's my opinion, yes.

Q Now, you would certainly agree that there are factors other than the promotion of cigarettes by the manufacturers that are relevant to the determination of whether to become a smoker or not in the military, wouldn't you?

A Sure.

Q What are those factors?

A Well, probably friends smoking, age certainly is one of the variables. I think the product is very important in terms of whether people continue to smoke in terms of nicotine in the product. That seems to be a major factor that gets people to continue smoking and makes it difficult for them to give up cigarettes.

And I certainly don't hold a view that all advertising is aimed at trying to get people who are not smokers to start smoking. I do think that some of the advertising certainly is aimed at that area, but I think a lot of the advertising is also aimed to try to keep people who are smokers to continue smoking or perhaps smoke more cigarettes so you make more money selling them.

Q Perhaps to try to convince smokers to smoke one brand versus another brand?

A Certainly.

Q Okay. Now, I think you said that the smoking of one's peers is an important factor in the military with respect to the initiation of smoking. Is that correct?

A Yes. I mean, I wouldn't deny that. I think that's true.

Q Now, the military is a unique organization

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in many ways, and one of the ways it's unique is that the military encourages cohesiveness and uniformity among its personnel, doesn't it?

A Yes. I've never been in the military, so I

don't know specifically, but I've read that, yes.

Q And you would agree that the military's encouragement of cohesiveness and uniformity is a factor that may have a fairly strong influence on the initiation of smoking among military personnel?

A That's been discussed in some of the publications that I've read, yes.

Q In some of the publications you've written also, hasn't it?

A On the military?

Q Yes.

A I don't know what you're referring to specifically.

Q You would agree, Doctor, that the military's encouragement of cohesiveness and uniformity is a social factor that may have a fairly strong influence on the initiation of smoking by new military personnel?

A I think friends smoking and peer smoking and certainly if your sergeant is smoking, that might have an influence because the sergeant is a role model for the new recruits in the service and so on. And that certainly has

been discussed as a factor that contributes to smoking, but as has advertising been discussed as a factor.

Q Doctor, isn't it also true that the military services have historically reinforced a pro-tobacco norm?

A Historically, I think today the thing is quite different than it was back in World War II.

Q That's not my question.

A I mean, if you could define historical context, I could answer it.

Q You didn't need any definition last night when I deposed you, did you?

A I don't recall. It was pretty late when I was being deposed last night.

Q Now, during the World War I, the war department actually began issuing tobacco rations at the request of officers; is that correct?

A Yes.

Q Now, I believe you told Mr. Motley that the bottom line is that military personnel may smoke at a 10 to 20 percent higher incidence than the general population.

A The surveys that I've looked at show that military smoking rates are higher than the

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general population, about 10 to 20 was my best guess at it. I haven't really studied it precisely to get you an actual number. But 10 to 20 seems like a pretty reasonable estimate.

Q Let's talk about what you've studied. You yourself have not conducted any formal study on the effect of marketing or promoting of cigarettes by the cigarette manufacturers with respect to the incidence of smoking among military personnel, have you?

A Not in the military. I've done formal studies looking at tobacco marketing in general.

Q Okay. My question was the military: The answer is no?

A The military is just one target group, and I haven't looked specifically at the military just as a target group, other than looking at the examples of the ads which are similar to the examples of advertising you see for other target groups.

Q Let's switch topics and talk about

epidemiology for just a minute or two.

You're not certified as an epidemiologist by the American College of Epidemiology, are you?

A I don't believe most epidemiologists are, but I'm not.

Q I'm not asking about most of epidemiologists.

A I said no.

Q I'm asking about you, Dr. Cummings.

A No.

Q The answer is no?

A That's correct.

Q You are also not a fellow of the American College of Epidemiology, are you?

A No, I'm not.

Q Now, I think you told us that your formal training is in an area called health behavior and health education?

A Right, from the School of Public Health at the University of Michigan.

Q You don't have a Ph.D. or master's in biostatistics, do you?

A No. I've taken quite a number of courses in statistics and use statistics heavily in my

research.

Q You don't have a Ph.D. or master's in statistics, do you?

A No.

Q You don't have a Ph.D. or master's in epidemiology, do you, Doctor?

A No, I do not.

Q You've never written textbooks in the field of epidemiology, have you?

A I've not written a textbook.

Q And you've never published an article in a

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peer-reviewed journal on the epidemiologic studies of environmental tobacco smoke and lung cancer, have you?

A Not specifically on lung cancer. I have on other topics.

Q You've never meta-analyzed the workplace studies of environmental tobacco smoke, have you?

MR. MOTLEY: Excuse me, Your Honor, I was told not to go into this. Now he's asking about it.

MR. FURR: I'll withdraw that question.

THE COURT: Withdrawn.

MR. FURR: Let me check one thing. I'm almost done.

Q Dr. Cummings, you've never conducted any studies of the smoking policies at the Marion VA and the factor that's led to the formulation of those policies, have you?

A No, I haven't.

Q And you also have no familiarity with the series of smoking policies that were in place in the Marion VA between 1973 and '91, do you?

A No, I don't.

MR. FURR: Thank you, Doctor. That's all I have.

THE COURT: Thank you, Counselor. Mr. Motley?

MR. OHLEMEYER: I just have a couple, Your Honor.

THE COURT: Mr. Ohlemeyer.

CROSS-EXAMINATION,

BY MR. OHLEMEYER:

Q Doctor, who writes the Army manual you told us about?

A I don't know the person.

Q It's the Army; right?

A I would assume somebody in the Army writes it.

Q Who writes the VA regulations you told us about?

A I would assume somebody in the VA administration.

Q And this exhibit you told us about, which was identified as Plaintiffs' 1101, the letter from Joseph Cullman to General Bohannon, you've read that; right?

A Yes, I have.

Q It is dated October 1962?

A Right.

Q And it was written in response to the Air Force's decision to suspend a long-standing practice concerning the distribution of cigarettes.

A That's correct.

Q And the letter describes the fact that most of the tobacco that ends up in the armed

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services is donated by veterans and civic groups; right?
A That's what the letter says, yes.
MR. OHLEMEYER: That's all I have. Thank you, Your Honor.

THE COURT: Redirect?
MR. MOTLEY: Briefly, Your Honor.

REDIRECT EXAMINATION

BY MR. MOTLEY:

Q This document is in evidence. It's 33608. These are remarks of Mr. Johnston, the chairman of the Tobacco Institute in 1989. Comments about public smoking issue. Would you read what I've highlighted, please, sir?
MR. WAGNER: Judge, first of all, this is not proper redirect examination.
MR. MOTLEY: He went into two sets of the VA policy, Your Honor. This is in response to that.
MR. WAGNER: This briefing to Gene Johnston has nothing to do with that, Your Honor.
THE COURT: Can I see it?
MR. WAGNER: Sure.
(Bench discussion)
THE COURT: Go ahead, Mr. Motley.

BY MR. MOTLEY:

Q Doctor, on the issue of smoking policy at the VA, would you read into the record, please, sir, this and the next page, and then I'll ask you something about it.

MR. WAGNER: For the record, Your Honor, I object to the witness testifying about a document that Your Honor has admitted pursuant to a limiting instruction, a document he's never seen before. It has nothing at all to do with his testimony. It's a repetitious matter, too, Your Honor.
THE COURT: Overruled. Go ahead.

A I have seen this document before, by the way.
"Today veterans organizations have become increasingly active in opposing efforts to ban smoking in VA hospitals. We are working with the Paralyzed Veterans Association and the Non-commissioned Officers Association, first to encourage a coalition of veterans organizations, including the American Legion, the VFW, the Vietnam Veterans of America, the National Coalition of Vietnam Veterans, and others to sign onto a letter opposing smoking bans in VA facilities; and second, to develop a proactive approach to the problem, a model smoking policy for the veterans groups to lobby within the administration."

Q Is that consistent with your opinion you

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testified about on direct examination?
A Yes, it is.
Q Doctor, two other things. You were accused or admitted or fessed up to being a soldier in the war on tobacco. What do you understand from your own personal knowledge perspective, why would you characterize an article as a war on tobacco?
A Well, because I think it is a bit of a war on tobacco to get the truth out about how bad smoking can be for people. And I think that truth has been suppressed, in my opinion.
Q Doctor, the last question I want to ask you is: Have you published epidemiological studies on smoking and health?
A Yes, I have.
Q And were they in articles or journals where people had to review them for their scientific accuracy?
A Yes, they were.
Q And have you published on environmental tobacco smoke?

A Yes, I have.
MR. MOTLEY: No further questions.
THE COURT: Thank you, Mr. Motley.
Mr. Furr?
MR. FURR: No questions, Your Honor.
THE COURT: Mr. Ohlemeyer?
MR. OHLEMEYER: Just one.

RECROSS-EXAMINATION
BY MR. OHLEMEYER:
Q Doctor, have you ever heard of King James of England? King James, I?
A Yes, I have.
MR. OHLEMEYER: Thank you. That's all I have.
THE COURT: You may step down. Thank you.
MR. MOTLEY: I was going to ask him has he ever read his Bible.
THE COURT: Thank you.
You have one more rebuttal witness, Counselor?
MR. MOTLEY: I do, Your Honor, subject to Mr. Wiley's situation that would be two seconds, but I have one more. I have

a doctor waiting.
THE COURT: Okay. Call your next.
MR. MOTLEY: Dr. Loehrer, please.
THE COURT: Raise your right hand.

PLAINTIFFS' WITNESS, PATRICK LOEHRER, M.D., SWORN

THE COURT: Be seated, please. Would you tell the jury your name.
THE WITNESS: I'm Dr. Patrick J. Loehrer.
THE COURT: Would you spell your last name for the record.

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THE WITNESS: L-O-E-H-R-E-R.
THE COURT: Thank you.
DIRECT EXAMINATION,
BY MR. MOTLEY:
Q Dr. Loehrer, if you would try to sit up close to the microphone there, if you don't mind.
A Sure.
Q Have you been in courts of law before?
A A few times.
Q Have you ever testified in a cigarette case?
A Never.
Q And, Doctor, where do you practice?
A Indiana University.

Q That's not the University of Indiana?
A Not the same.
Q Okay. And where is that, sir?
A It's in Indianapolis, the Medical Center is in Indianapolis.
Q And you're a medical doctor?
A Yes, sir.
Q Are you married with -- are you a married man?
A Yes.
Q And you live in [DELETED]?
A Yes.
Q And you are licensed to practice medicine in Indiana?
A Yes.
Q What kind of doctor are you?
A I'm a medical oncologist.
Q You're a medical oncologist. Do you treat cancer victims?
A That's almost exclusively my practice.
Q Do you diagnose cancer victims?
A Yes.
Q Do you admit them into the hospital and then treat them and try to save their lives?
A Yes.

Q How often do you do that?
A This is -- as far as saving their lives? Every day.
Q How much of your practice is diagnosing and treating actual human beings who have cancer, sir?
A Every day of the week while I'm in the hospital, I see patients as outpatients, and today I saw them as outpatients and brought one or two in the hospital.
Q Would you say, sir, that you spend most, almost all your time with people who are either fearful they have cancer or treating someone who has been diagnosed with cancer?
A All of my clinical time is spent doing this.
Q Tell the ladies and gentlemen of the jury what you mean by clinical time. What does that mean, a doctor who practices clinical medicine? What do you do?
A Well, my definition is a physician who

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actually takes care in taking care of patients. And at Indiana University I have the responsibility of seeing many patients, particularly with gastrointestinal cancer, as well as GU cancer and lung cancer and a

variety of other malignancies. I also have a role in academic medicine, so I'm involved in teaching and doing research.

Q Are you licensed to practice medicine in Indiana?

A Yes, sir.

Q Did you have a clinic today?

A Yes, sir.

Q And just generally did you try to help families and people who had cancer today?

A Yes.

Q Is that, in essence, what you do day in and day out, that plus teach other medical students?

A Yes.

Q You went to Purdue University, graduated in 1975?

A Yes, sir.

Q You went to medical school at the Rush Presbyterian St. Luke Medical College in 1978?

A Yes.

Q You had an internship at that same hospital?

A Yes.

Q And then you did a fellowship at Indiana

University Medical Center; correct?

A Yes.

Q In what subject?

A Medical oncology.

Q Would you define medical oncology for the ladies and gentlemen of the jury, please, sir.

A There are basically three major ways of treating cancer. The primary way is surgery, to surgically remove it. So there are surgical oncologists who specialize only in cancer patients.

The second way is with radiation therapy, where they give external beam from the outside and they are called radiation oncologists.

And the third group of people are what we are, are internists that deal with cancer. And our primary way of treating cancer patients is with chemotherapy, although as an internist we're also involved with the management of patients with cancer even when we aren't giving them chemotherapy.

Q Patients with cancer who are undergoing

serious treatment often have other things that happen to them while they're in the

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hospital? I mean, their bodies, their systems get turned upside down, don't they?
A Absolutely.
Q And so you're a doctor of internal medicine also?
A Yes.
Q An internal medicine doctor does what?
A Internal medicine basically deals with adults, and it is more specialized than a family practitioner, which may take care of children, they may do some surgery, they may do some obstetrics. An internist will take care of the non-surgical aspects of adults who are ill.
Q For example, if you give a cancer victim chemotherapy, they may become nauseous and you have to treat that; is that true?
A Correct.
Q Now, Doctor, do you, as part of your practice, do you regularly have to do what's called a differential diagnosis?
A Yes.
Q Explain -- just in the context of cancer

now, explain to the ladies and gentlemen of the jury what it means for you, a cancer specialist, to do a differential diagnosis?
A Basically it's a thought process we go through. A patient presents with a symptom, and what we do as clinicians is try to think about what could be the possible causes of this symptom.
A patient may present with anemia, and is it a problem with the bone marrow not working or is it a problem that they aren't taking enough iron or is it a problem that they're losing blood, say, from a colon cancer or a woman who is menstruating too heavily.
So when we see a problem, then we try to go through a list of the possible -- the possibilities that may cause this problem. We do that when a patient presents with a certain kind of symptom that may be related to cancer, for example. And many times a patient -- for instance, a patient may come to my office complaining of a headache. Now I know that they have cancer, I know that I get headaches and most normal people get

headaches. But one of the things in my differential diagnosis is, could this headache be caused by cancer? And so I have to ask that patient a number of questions that would make me suspicious or not so suspicious. And if I was suspicious, then I would get the appropriate tests that would lead me to make sure the patient didn't have cancer in the brain, for example.
Q Doctor, do you, and again, everyone knows that this -- one of the issues in this case

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is whether Mildred Wiley died from lung cancer or pancreatic cancer. You understand that's an issue that's been raised?
A Yes.
Q What is the bottom line, Doctor? You have studied Ms. Wiley's case. Did Mrs. Wiley die of lung cancer or did she die of pancreatic cancer?
A I believe she died of lung cancer.
Q Why do you believe she died of lung cancer?
A I think there is a preponderance of the evidence that points to this. Her chest X-ray is a classic X-ray for a patient presenting with lung cancer. She had spread

of her tumor in a pattern that is very consistent with lung cancer.
Lung cancer commonly goes to the bones, it can go to the adrenal gland, it can go to the skin. Pancreatic cancer does not travel up to lymph nodes near the hilum of the lung. It is not a common one for going to bones. It does not go to skin. And for that reason, because of the way this behaves, and the way it looks on X-ray, I really have no doubt that this was a lung cancer.
Q Doctor, you're a board-certified medical oncologist?
A Yes, sir.
Q You had to take a test and pass it in order to hold yourself out as a specialist in the diagnosis and treatment of cancer; correct?
A Yes.
Q And you are one of those?
A Yes, sir.
Q And how long have you been a board-certified medical oncologist?
A Since 1983.
THE COURT: I didn't hear you, Doctor.

THE WITNESS: 1983, I'm sorry.
Q I think what we're going to have to do here, Doctor --
MR. MOTLEY: Your Honor, can you inquire if the jurors can hear him?
THE COURT: Actually, Doctor, I think the round one, that one amplifies.
THE WITNESS: So this is better this way?
THE COURT: Yes, I believe so. Tell me if you can't hear him. Hold up your hand.
Q My point was simply to illustrate that you need to talk loud enough for me to hear, okay?
A Okay.
Q Imagine that I'm really sitting back there with Mr. Patrick. All right.
A Okay.

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Q Doctor, are you also involved in the certification process of young doctors?
A Yes, I am.
Q Will you explain that to the ladies and gentlemen of the jury.

A There -- just as you mentioned a minute ago, we take -- in internal medicine, we take boards, a test that you have to have a certain competency in in order to be considered an internist, a board certified internist. Similarly there are tests that are taken at the end of a fellowship in medical oncology or any other specialty. And these boards are fairly lengthy exams that physicians need to pass.
And I serve on the American Board of Internal Medicine for Medical Oncology, so I'm responsible for writing -- helping to write the questions that certify people into the boards for medical oncology.
Q And you do this on a national basis?
A Yes. This is for the American Board of Internal Medicine. It's just a small group of us that write these questions.
Q Are there any other medical oncologists who practice clinical medicine on diagnosing and treating cancer victims from the state of Indiana who serve on this board that prepares these exams?
A No.

Q You're the only one?
A Excuse me for interrupting.
Q You're the only one?
A Yes.
Q And last week were you there doing that?
A Yes, sir.
Q Where did you travel to help prepare the exam to make medical oncologists take a test?
A The headquarters for the American Board of Internal Medicine is in Philadelphia, and that's where the meeting was.
Q Now, Doctor, you teach at the Indiana University School of Medicine.
A Yes.
Q What do you teach students?
A I try to --
Q No, no. What course?
A What course? It gets a little -- it's a little awkward. The teaching in medical school, by and large, is like an apprenticeship. So medical students and residents follow with me as I'm seeing patients and I see them in the hospital, and then we'll have small lectures that we'll

get together.
In addition, we get together with --

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there's a sophomore core group of classes, and we teach the medical oncology portion of the -- for the medical students.
Q You teach them how to diagnose cancer?
A We try to teach them, yes.
Q And you try to teach them how to treat cancer?
A We don't want to give away all our secrets, so we -- but we tell them how we treat them and give them -- we give them guidance and give them an understanding of why we're treating patients and for what reasons.
Q And then you have a stage called residences and interns and whatnot?
A Yes.
Q And there you actually go around and take the doctors, the aspiring doctors with you to meet the patients and talk to them while you examine the patients, things like that; right?
A Exactly.
Q So you try to help them by showing them what to do.

A Exactly.
Q All right. And you do that for cancer cases; right?
A Do that -- right. We have a cancer ward at University Hospital, and we'll routinely round and staff that ward.
Q Doctor, I know you probably haven't kept count, but could you tell the jury, just give them some idea, how many cases of cancer since you've been practicing medicine have you had the opportunity to either diagnose or treat or do both? Are you talking 100? Are you talking 1,000? How many are you talking about?
A Several thousand.
Q And do you often have to consider whether the cancer is coming from one part of the body as opposed to another part of the body?
A Yes.
Q And is that part of the differential diagnosis?
A Yes.
Q Do you pride yourself in the ability to figure out where a cancer began?
A I hate to use the word pride just because of

my upbringing, but I'm pretty good.
Q And how long have you been teaching medical students and residents and interns and other doctors about how to distinguish where a cancer comes from, one part of the body versus the other?
A Since early 1980s.
Q Doctor, have you published articles for other doctors to learn of your experiences in medical literature?
A Yes.

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Q How many? On cancer approximately.
A Somewhere between 130 and 150.
Q And are most of those about cancer?
A Virtually all of them.
Q About cancer diagnosis and treatment?
A Yes.
Q Have you published chapters in books, medical books, that are used to teach people about medical science and diagnosing and treatment of cancer?
A Yes.
Q Approximately how much chapters in books have you written?
A I can't -- 15 to 25.

Q Do you serve on any editorial boards of journals that are out there for specialists in the treatment and diagnosis of cancer to read?
A Yes.
Q Which ones, sir?
A I served on the Journal of Clinical Oncology which is the biggest circulating journal. I'm associate editor for the Yearbook of Oncology, which is published once a year. But what we do is, on a weekly basis, get a stack of articles that we review, and then we pick out the best of these articles and make comments on those.
Q Is that a national publication?
A Yes. It's published in the United States but is circulated internationally. Journal of Urology. I'm associate editor for Journal of Clinical Investigation, I've been associate editor for.
Q Doctor, do you have hospital appointments at the Indiana University Hospital, the Wishard -- did I pronounce that right?
A Wishard. Just two syllables.
Q I can't get anything right pronouncing.

Wishard --
A Yes.
Q -- Memorial Hospital, the Indianapolis Veteran's Administration Hospital?
A Yes.
Q Are you a member and active in the Hoosier Oncology Group? I got that one right.
A Yes.
Q The American Cancer Society?
A Yes.
Q Have you been recognized by other cancer specialists and honored as an American Cancer Society Fellow?
A Yes.
Q And have you been listed in the Best Doctors in America? The only reason I'm asking you this, the jury has to be able to evaluate your qualifications.
A Yes.
Q Now, Doctor, have you written and published

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and lectured on the subjects of pancreatic cancer?
A Yes.
Q Lung cancer?
A Yes.

Q Breast cancer?
A Yes.
Q And I take it you've treated pancreatic cancer and lung cancer?
A Yes.
Q Doctor, did you at our request undertake an investigation of Mildred Wiley and whether she died of lung cancer or pancreatic cancer?
A Yes.
Q Just tell us generally what you looked at.
A I looked at her X-rays, medical records, and also looked at her pathology slides.
Q You say you looked at her X-rays, Doctor. Do you believe that your opinion that you gave the jury that she died of lung cancer, do you believe that the X-rays would demonstrate to the jury why, at least in part, why you believe that?
A I think they should.
MR. MOTLEY: Your Honor, I would ask to be allowed to let him show this.
THE COURT: Do you have a shadow box?
MR. OHLEMEYER: Your Honor, this

isn't part of what was proffered as rebuttal.
MR. MOTLEY: Yes, it was.
MR. OHLEMEYER: I don't think it's proper rebuttal. I'll bring it to you point by point that they gave us.
MR. MOTLEY: Would you bring me up, please, Jim.
MR. OHLEMEYER: It's got a lot of scribbles on it.
THE COURT: That's all right.
(Bench discussion)
THE COURT: You may demonstrate with the picture, Counselor.
A With a drawing or --
Q No. We've got this?
THE COURT: View box?
You can step down.
Q Doctor, I would advocate, if you would, if you stood like this, and you -- did I put it in right?
A No.
Q Would you give me an F?
A Yes. No.
Q Not even that high. Okay. Here. Keep in

mind that --
A Let me use this.

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Q All these folks have to be able to see?
THE COURT: Do you need to see, too? Go ahead, Doctor. I may move around but go ahead.
A This is, what I wanted to do is just give a normal chest X-ray and what it looks like. Is this working or no?
Q Yes, sir.
A The heart is a border right here. These are diaphragms that separates the abdomen from the lungs. This area here is the lung area here. These are the clavicles and these lines coming across are the ribs.
So this is Mrs. Wiley's X-ray, a normal X-ray taken in 1984. It's hard to read backwards.
But if you look at this area here, this is a crisp and clean X-ray. Everything looks normal. A normal chest X-ray.
Q Would you pick out the next one please, sir.
A This is her X-ray when she presented in 1991. And that area that was again over here, you see a nice crisp heart border.

Q This is her left lung here?
A Correct. This is as if you were looking this way. So this is her left lung.
Q And that's the right lung?
A This is her right lung.
Q Just like I'm standing here?
A And what we see now is a very large right hilar mass that extends out over here. And this is a typical X-ray of a lung cancer. I mean, I think -- now, could this be pneumonia in the right middle lobe, the answer is yes, it could be. So that goes into our differential diagnosis when we're seeing a patient.
But this is clearly abnormal and not a normal X-ray and wouldn't be mistaken by a -- really by anybody that is competent to treat patients as being a normal X-ray by any stretch of the imagination.
Now, a CAT scan was done of the chest June 3, 1991. A CAT scan is basically -- it's a very specialized X-ray. It takes slices through the chest. And it's kind of like the old -- the Vegimatic or an egg slicer where you just take a slice through

here. And so rather than looking at a patient this way, you're actually doing cross-sections through the patient.
So now we're cutting down through the patient. The patient is lying flat on a table, and this is cutting through the chest here. And what you can see here on the left side, which is the normal side --
Q This side here?
A Yeah. Except you would have to lay down and I don't think they want to see that.

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Q I wouldn't take a vote on that.
A When you look at the left lung, again, this is looking from below at different slices, it looks absolutely normal. The dark area is absolutely normal coming through here. And you don't see any abnormalities.
Now, on the right side as we look through here what we can see is this whitish area.
Can you guys see that from where you are? You probably can.
And this whitish area, again, the big bulk of the mass, I think, shows up right here, and this is that hilum area which are

the lymph nodes that drain the lung tissue itself, not in the middle of the chest but right next to the middle of the chest.
And this is enlarged here. And what we see down here is an area of whiteness which can represent pneumonia that is blocked off or it could represent tumor. Almost like an L-shaped area here, we see this coming down this way. We take cuts that are going down farther. Again, connected with this hilum, we see it going up over here, going up in this direction here. So we basically have this large mass here.
If you look up -- and I don't know if you can appreciate that or not, but there's a black line.
Q Right there?
A That comes across there. I suddenly had to wear these distant glasses. But this is the bronchus of the lung. And if you got up close and looked at this -- and you may do that later, I guess -- you can see that this comes into this area of where the lymph nodes are enlarged and it is squeezed off in that area there.

Q The airway is coming in and it's being squeezed off by the tumor? Is that what you said?
A Correct. And then beyond that, then, is this area of infiltrate that's, you know, that's probably a pneumonia at this point in time.
Q Okay.
A This is a CAT scan of her abdomen done June 3, 1991. Again, taking slices but going down a little bit farther down. This dark area here is the liver. These little lines going through here are the bile ducts of the liver. This is the gallbladder here. And then you look around over here, and this organ right over here is the pancreas.
Q Right there in the middle of that one?
A Yes. And that looks absolutely normal there. There is no lymph nodes around here that are enlarged that we can see and it

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looks normal.
Going up again back to the chest, just to notice, there is some fluid here on the right side of the lung there where the abnormality was. But, again, this looks

absolutely normal there.
Q I want to make sure. This is photo -- which photo is it that shows a normal pancreas?
A If you want, I can make a little mark.
Q Please do, sir.
And for the record, that's photo -- does it have numbers? Or just the bottom row in the middle.
A Image No. 8.
Q Image No. 8. And the pancreas is right there?
A You want me to put --
Q Do you mind? Because that's rather important.
A (Witness complies with request.)
Q And you say that's absolutely normal?
A It looks normal to me.
Q Do you spend a lot of your time looking at CAT scans to determine whether or not a patient who you are treating has cancer of the abdominal cavity?
A I'm also in charge of our gastrointestinal multi-disciplinary clinics, so I have a clinic that I run -- or a conference I run every Thursday, and I see patients on Monday

morning. That's why I'm apologizing I'm late here today. But we will go over in this conference with the surgeons, the radiation doctors, the radiologists and pathologists. I'm going --
Q Go ahead.
A That's fine. We will go over all these films, so I'm pretty used to looking at these films and looking at the pancreas.
Q Something you do on a regular basis?
A Yeah. Regularly.
This is her -- just as an aside, I guess, but this is her bone scan. A bone scan is a material that's injected into the bloodstream, and it has a propensity of going to the bones, particularly in the areas that have increased uptake or activity.
A picture of the bone scan actually looks almost like that negative on the Shroud of Turin, but that's the way they would look like. And again, this is the outline of the bones in the body. Normally it should be kind of a same kind of intensity throughout the bones. You can see

on her bone scan she's got a dark spot in her skull, she's got a huge dark spot in her

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femur, multiple spots --
Q Femur, show them where you're talking about.
A Femur, I'm sorry, is over here. Multiple areas of cancer in the bone, in the skull. And, again, this would be typical for lung cancer to spread to the bone like this. This would be very, very atypical for pancreatic cancer to do this.
Q It would be typical for the lung and what for the pancreas?
A Atypical.
Q Atypical? Untypical.
A Untypical.
Q So if somebody told the jury that it's typical for pancreatic cancer to spread to the bone, is that true according to your experience and your knowledge, your teaching?
A It is not true.
Q It is not true.
Anything else on there? Anything else on that one?
A No. I think we're all done.

Q Okay. Thank you, sir.
MR. MOTLEY: Your Honor, I want to mark the one that the doctor has marked on separately for the record, if I might. 123.
Q Now, Doctor, you met me the other night for the first time in your life; correct?
A Last night.
Q Last night. And I asked you to tell us what you believed to be the basis for your opinion that this lady had a primary lung cancer as opposed to primary pancreatic cancer, did I not?
A Yes.
Q And did we type those reasons up? And I've now put them on this board. But do you recognize these as the reasons that -- the first board?
A Yes.
Q And then the second board?
A Yes.
Q Would you come down, please, sir.
You have to keep your voice up here, but I want you to tell the ladies and gentlemen of the jury why you, a cancer specialist, believe this was lung cancer and

not pancreatic cancer, primary lung cancer. Go ahead. One at a time.
A Excuse me, I'm going to just for the second, just for the second -- and I'm sorry, I don't mean to be frivolous, but David Letterman came from Ball State and he did these top ten reasons, too, and I don't -- this does not --
Q I don't know if this records.
A No relationship.
Q This records.

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A Okay. Basically the reason that -- and that was just the ten reasons that happened to come up.

When the patient presented, she presented with very typical signs of lung cancer, and that's going to be cough, coughing up blood, chest X-rays showed this mass in the right middle lobe. It is basically the very typical no-brainer diagnosis as far as --

Q No what?

A No-brainer. This would be something that would be typical, once a patient is diagnosed with cancer, this is something

that we would typically think is the case.

Now, she had some back pain, but her back pain was in the low lumbar area, which is very low. Now, that -- there is a couple explanations for that. But if you have pancreatic cancer, the pain that you get for pancreatic cancer is in the pit of the stomach up here higher, almost straight back. And it usually causes the patient to bend over and curl up because of the pain in the pancreas, which is going into the nerves in the upper back. So low lumbar pain is not something that would be typical at all for pancreatic cancer.

Q Where is the lower lumbar versus where it would be? Could you turn around and let them see.

A Down at the pit of your back here. Where most people get, when they get back pain from strain, they are going to get it low down here. And it may go into sciatica.

Q Show them the lumbar and where she was.

A Okay. Her pain was down here.

MR. OHLEMEYER: Excuse me, Your Honor, may I ask a question on foundation

here?

THE COURT: Go ahead.

MR. OHLEMEYER: Doctor, did you ever examine Mrs. Wiley?

THE WITNESS: No.

MR. OHLEMEYER: Did you ever talk with any of the treating physicians who examined her?

THE WITNESS: No, I haven't.

MR. OHLEMEYER: I object to him telling the jury where her pain was. He can describe things in the medical record but I don't think he should be telling us --

THE COURT: I think that's what he was doing, Counselor.

Q Were you describing what you saw in the medical records, sir?

A I guess what I was trying to explain anatomy, low lumbar area is down here. That's where she had complaints of pain in

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the records. That's where I'm pointing at.
Q Okay. That's fine. Go ahead. You can continue.
A And the typical pain that you would have for pancreatic cancer would be up higher here in

the chest, and then perhaps straight back if you were going to have it.
Q Okay. And do the records support what you just told the jury, that she reported pain down here as opposed to up there?
A Correct.
Q Go ahead.
A She also had skin metastases, and they biopsied that at one point in time which showed cancer. I have never seen a patient with pancreatic cancer get skin metastases.
Q Never seen it?
A Never seen it.
Q If someone told the Court and jury that that happens all the time, that wouldn't be true or untrue according to your experience?
MR. OHLEMEYER: Objection, Your Honor. This is argumentative.
THE COURT: Sustained to that.
Q Go ahead. You've never seen it, though.
A I have not seen it.
MR. OHLEMEYER: Asked and answered, Your Honor.
THE COURT: Go ahead.
A Okay. The CAT scan, again the CAT scan was

normal in the pancreas. She had enlarged cervical notes which is another drainage area for the -- on the right side as well as the left side, which is a drainage pattern for lung cancer also when it spreads beyond the chest.
The number two reason is the appearance of the tumor. And that's -- this is a little more problematic, I think, in terms of, you know, for a layperson, but when you're looking at a pathology record and looking at a tissue or a slide underneath an X-ray, it is very hard for a pathologist to say conclusively where this tumor is from.
Adenocarcinoma, which is the kind of cancer that this patient had, is a cancer that starts out in the glands. It's a cancer that forms in the glands. And there are glands throughout the body. There are glands in the mouth area, there are glands in the lung, there are glands in the pancreas and in the colon, and they're all adenocarcinomas.
And I think some of the times the pathologists may go out on the limb a little

bit in terms of trying to say exactly where it's from, and we tend to use the clinical

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things.
The cancer in the bone, as I mentioned previously, this is typical for lung cancer. It is very rare for pancreatic cancer to go this diffusely with bone metastases. It is very rare to get bone metastases at all. But if you did, you would expect it to be, as I mentioned before, direct invasion from the pancreas into the back and not spread diffusely throughout the body.
The pain in the back, as we've mentioned before, is in the wrong area for this.

Q For "this" meaning what, pancreatic or lung?

A I'm sorry. It would be the wrong area for pancreatic cancer and would be a reasonable for a patient with widespread disease from lung cancer.
There is no cancer in the liver. Pancreatic cancer typically will start out in the pancreas, grow locally, may spread to the regional lymph nodes, and then it likes to spread to the liver. Because the blood

supply for most of the organs in the abdomen travel to the liver. So that's one of the first places it goes. It likes to go to areas of first resistance.
And, again, this is something that would be highly unusual for her to have widespread pancreatic cancer and not have more problems intra-abdominally, in the liver, throughout the lining of the abdomen, and oftentimes they get involvement of the ovaries. And none of that happened. This was -- it would be very unusual.

Q Have you lectured about pancreatic cancer and how it spreads in the gastrointestinal area, sir?

A Yes. Yes.

Q Okay. Have you lectured about how lung cancer spreads?

A Yes.

Q Have you written about lung cancer spreading?

A Yes.

Q And pancreatic cancer -- when I say "written," you have written an article for doctors to read; right?

A Yes. Yes.

Q Go ahead.

A I think we're through on this one.

Q Okay. Cancer not in both lungs, what does that mean?

A Well, for a cancer that starts out somewhere below the diaphragm, the usual pattern is for it to be -- if it's going to spread to the lung, which it can do, you would expect kind of a showered metastasis, it's not going to take any preference of one side of

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the lung or the other.
Q Showering meaning what?
A Many different spots in the lung. And again, it usually is not going to stay in one side or the other.
And the fact that this was primarily on the right side -- in fact, it was entirely on right side, again, would be unusual for something down here in the abdomen just to go that area. Particularly given the fact that this cancer was so widespread. It went to many bones, it went to the kidney, it went to the skin. It's just hard to imagine that it would do all those things and not go

over to the other lung.
Cancer in the hilar lymph nodes, as I mentioned to you on the CAT scans, this is a typical drainage part of the lung cancer. There are lymph nodes in the middle part of the chest. We call that the mediastinum. I think probably coming from media or middle. The hilum is off to the side and that is the first draining area for lung cancer. And, again, these are the lymph nodes that were filled up with cancer.
It is -- I cannot think of an anatomic way, I can't think of the logical way you can have a tiny tumor in the pancreas get up over to the right side of the lung in the lymph nodes. There is no pathway that directly connects this area on the right side of the lung over here into the lymph nodes here. So it's not a direct spread. It would have to be by the bloodstream, and that, again, if it was going to do that, you would expect cancer in both sides of the lung.
Q Which we did not have.
A Which we didn't see.

Q Okay.
A The other thing is the size of the tumors. These are very good size -- there's a good size tumor in the lung here. And we showed that on the X-ray. And that's a typical --
Q We had a clay thing prepared to 17 centimeters, all that. Does that, assuming that that's -- pretty crude, I know but...
A Yeah, but it's a good size tumor there.
Q A solid tumor too.
A Right. And the area in question in the pancreas or near the pancreas was a centimeter, which is smaller than the tip of your finger here.
It is, to me, you know, again logical things are logical. It's far more common with the bulk of the tumor and having that spread distantly than it is for this tiny thing without any local lymph nodes, without any other spread in the abdomen to travel up

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to the lungs and in this particular location.

And finally, basically, as was mentioned by the opposing attorney, I didn't see this patient, and I didn't treat the

patient. But looking through the records, all of those physicians who were involved with the care of this patient, particularly the ones that are dealing with cancer on a regular basis, there was no questions in their minds that the, by and large, this is going to be lung cancer.

The pulmonologist felt this way, as well as Dr. Songer, who is a medical oncologist.

Q Okay. Thank you, Doctor.

Now, Doctor, have you or do you intend to use Mildred Wiley's case as any teaching tool?

MR. OHLEMEYER: Objection, Your Honor, relevance.

THE COURT: You may answer that, Doctor.

A To be honest, I probably -- I think this is a pretty classic example. I wouldn't mind using her chest X-ray as a classic example of lung cancer, and I think I probably also will use this -- there is an entity of cancer of unknown primary in which we have a cancer and we can't determine a source, and

I'll probably use this as an example of, you know, of carrying things to the absurd, to be honest with you, about someone who has cancer spread out to make one think that. So I will likely use it in those different endeavors.

Q What is absurd, that she has lung cancer or that she has cancer of unknown origin?

A No. I think it's that one would think that this is coming from someplace other than the lung that you would call this a pancreatic primary.

Q You think that's absurd?

MR. OHLEMEYER: Objection, Your Honor, argumentative.

THE COURT: Overruled. You may answer.

Q You say you think that's absurd?

A I think so, yes.

Q Now, Doctor, I want you to assume that there has been testimony in this case that this case of Mildred Wiley's is a classic textbook or open and shut case of pancreatic cancer. Assume somebody said that, a doctor said that. Would you agree or disagree with

that?

A I would disagree with that.

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Q Why?
A For the reasons that I mentioned previously. I guess as that example, I think it is someone's probably reading about cancer from a textbook rather than taking care of the patient.
Q Doctor, do you spend, in addition to teaching medical students, do you spend most of your time trying to save people's life who have cancer?
A Yes.
MR. OHLEMEYER: Asked and answered, Your Honor.
THE COURT: Your answer, Doctor?
Q Yes, sir?
A Yes.
Q Doctor, is it of any moment in this case of Mrs. Wiley's that she was constipated?
A I don't recall, to be honest.
Q Well, if she was constipated, would that prove that it came from the pancreas?
A No.
Q Why?

A Well, there are many reasons of having constipation. I have several patients in our clinic today that had constipation. And particularly the fact that she had pain, and she was uncomfortable and not eating a lot, all of that leads to the fact of having constipation.
Q If she had elevated blood sugars, would that demonstrate to you that this had to have come from the pancreas?
A No.
Q Why?
A Well, there are many other reasons for elevated blood sugars, not the least of which is, depending on when they draw the blood, at the time with relationship to the time that she ate.
So on routine chemistry panels, we'll see all sorts of fluctuations of blood sugars; if they had a Snickers bar or had IV fluids running with dextrose and water, which is sugar water, it's going to make your sugar go up a little bit. In her case, actually, in alluding to that, her sugar wasn't that high.

Q Doctor, do you believe, based on all the information you've looked at, what is an ERCP test?
A ERCP stands for endoscopic retrograde cholangiopancreography. It's a test basically in which a gastroenterologist will put a tube down the throat past the stomach into the small intestine and then they cannulate the bile duct or the pancreatic duct and squirt some dye to get -- to visualize the pancreas. And the structure

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of the pancreas.
Q In your opinion, sir, based on your knowledge of this case, was any reason to make her, Mildred Wiley, undergo that test?
A No.
Q Why?
A Well, there is no suspicion, based on -- and even if they had done one, it would have been a normal examination based on the size of this tumor.
Q What about ultrasound in the pancreas; was there any reason to have done that?
A No.
Q Why?

A Again there is nothing clinically pointing to the pancreas in this area.
Q Doctor, if a medical resident of yours who you were teaching to be a cancer specialist looked at Mildred Wiley's case and told you that this was a pancreatic case started in the pancreas, what grade would you give it?
MR. OHLEMEYER: Objection, Your Honor. It's argumentative, lacks relevance.
THE COURT: Sustained.
MR. MOTLEY: Just one second.
Q Without getting into what grade you would give him -- listen carefully and don't answer until the Court rules.
Would you feel as a doctor you would want to certify someone who thought this was a pancreatic cancer as someone that should be diagnosing and treating cancer patients in your hospital?
MR. OHLEMEYER: Same objection, Your Honor.
THE COURT: Sustained.
Q Doctor, did you present Ms. Wiley's case to the other medical oncologists who sit on the National Board of Examiners?

MR. OHLEMEYER: Objection, Your Honor, relevance. It calls for hearsay.
THE COURT: You may answer that yes or no.
Q Did you?
A Yes.
Q And Doctor, do you normally consult with these other physicians about opinions in cases, matters like this? Is that something you would normally do? You discuss cases with them?
A We frequently --
Q Let me ask it this way. Let me start over. Don't tell us what they said, but based on your discussion with them, did you change your opinion that her cancer was lung cancer?
MR. OHLEMEYER: Your Honor, I object to that. That, in essence, is an argumentative question that calls for

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hearsay.
THE COURT: Sustained.
MR. MOTLEY: No further questions.
Q Oh, Doctor, are you going to charge us for being here today?

A Yes, sir.
Q And you've spent how many hours on this case for us?
A I think the clock is still running.
Q I hope you don't meet some of those other doctors out in the hall.
A I have --
MR. MOTLEY: Thank you, sir. No further questions.
THE COURT: All right. Thank you, Counselor.
Cross-examination, Mr. Ohlemeyer?

CROSS-EXAMINATION
BY MR. OHLEMEYER:
Q Dr. Loehrer, do you typically give patients or their families a top ten list of symptoms that have to do with their cancer?
A Not this way, no.
Q There's really nothing funny about cancer, is there?
A No.
Q And there's nothing less serious about talking about cancer in a courtroom than in your office, is there?
A No.

Q Cancer is a serious matter, isn't it?
A Yes.
Q Doctor, you are an oncologist; right? That's your specialty.
A Yes.
Q There are doctors known as radiologists whose specialty it is to look at X-rays and CT scans; isn't that right?
A Yes.
Q You're not a radiologist.
A Correct.
Q There are doctors who look at tissue taken from people's body under the microscope known as pathologists; isn't that right?
A Yes.
Q You're not a pathologist.
A No.
Q And the doctors who typically conduct autopsies or review microscopically the results of those autopsies are pathologists; right?
A Yes.
Q How many autopsies have you conducted, Doctor?
A I have not conducted any myself.

Q And you use and rely upon and work with pathologists most of the time at your

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hospital when you're treating cancer patients; right?
A Yes.
Q And in your hospital, a pathologist has to sign off or sign out a biopsy taken from somebody's lung as either being cancer or not cancer; right?
A Yes.
Q You wouldn't conduct -- you wouldn't -- for example, if you had a patient that went to his or her doctor and had a chest X-ray taken and the radiologist said that's an abnormal chest X-ray, that doctor might order a bronchoscopy; right?
A Yes.
Q And the bronchoscopy would go down into the lung and try to take a piece of tissue or some washings for a biopsy; right?
A Correct.
Q And that biopsy would be sent to a pathologist; right?
A Correct.
Q And the pathologist would determine whether

he or she was looking at cancer or not cancer.
A Correct.
Q And depending upon what the pathologist found, you would get involved to help treat that person if they had cancer; right?
A Yes.
Q The pathologist is involved in the diagnosis microscopically; right?
A Yes.
Q And the radiologist looks at X-rays; right?
A To carry your extrapolation, they're involved with the diagnosis radiographically, and we're involved with the diagnosis medically.
Q And autopsies reveal information that's often unavailable or unknown to a doctor while a patient is alive; right?
A Correct.
Q And as you told us earlier, you never treated or were involved in the treatment of Mrs. Wiley; right?
A Correct.
Q In fact, from your review of the medical records, you know that she was never treated

for primary lung cancer; isn't that right?
A She got treatment from radiation therapy to her bone metastases, which is a treatment for her cancer.
Q She was not treated for lung cancer, was she, Doctor?
A She was treated for her symptoms of lung cancer, which is radiation therapy.
Q Well, Doctor, you remember last night I asked you that question at page 28, Counsel, line 5.

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"Doctor, was Mrs. Wiley ever treated for lung cancer?"

Your answer was no.

That's correct, right, she wasn't treated for lung cancer?

A Both answers are correct, what I said last night and what I said today.

Q That's fine, Doctor.

She was treated with a drug that doctors typically treat people with who have breast cancer; isn't that right?

A Yes.

Q And the only information you have about Mrs. Wiley was information given to you by

Mr. Wiley's attorneys; right?

A Yes.

Q And that was given to you about two or three months ago, wasn't it?

A No.

Q They gave you a big box of material, didn't they?

A Yes.

Q And it contained depositions of some of the witnesses who testified in this case, didn't it?

A It may have.

Q It didn't contain any testimony or depositions -- strike that.

It didn't contain any depositions of the doctors that the plaintiffs' lawyers brought to court to testify, did it?

A It may have.

Q Well, you told us last night that it contained the depositions of Dr. Bennett and Dr. Porter; right?

A And although you're only taking snippets about what I told you last night. What I told you last tonight is that I received a box of materials at some point in the past.

I wasn't sure when that occurred; a couple months ago.

What I also said, if you can let me finish.

Q Go right ahead, Doctor.

A That there was a bunch of materials in there. I ended up throwing out most of the records, because the records that I wanted to look at were the ones that I thought were most appropriate for answering this aspect of the case, which is whether or not this was lung cancer or pancreatic cancer.

Q And that aspect of the case was an issue that was made known to you two or three months ago when they first talked to you?

A It was made known to me, what I said I don't remember, but probably a couple months ago at the most.

Q And the records that they gave you actually were highlighted, weren't they, some of

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them?
A What -- on Wednesday afternoon, when I met with Mr. Young, I brought the box of records into the room where we met. I was telling him which records that were most appropriate

for me to review. He pulled out records. It turned out that he had some already pulled with these areas which were fine. I went through and looked through some other records, pulled out the ones I thought -- and the rest of the files, and which you know there are massive amounts of files, I pitched.
Q Doctor, what we both know is this: Is you produced for us a stack of medical records last night that had some yellow highlighting on them, isn't that right?
A Correct.
Q And that highlighting, for the most part, was highlighting the lawyers did for you; right?
A Yes.
Q Do you know Dr. Songer, the oncologist who was involved in Mrs. Wiley's treatment?
A Yes.
Q Have you talked with him about this issue or this case?
A No.
Q Do you know why the plaintiffs' lawyers didn't ask you to come testify during their

case in chief?
A No.
Q Am I correct, Dr. Loehrer, that pancreatic cancer does spread to the lung?
A It can spread to the lung.
Q In fact, if you go to a pathology textbook, as you suggested I do last night, you will learn that in an autopsy series of 104 patients, 62 percent had liver spread from the pancreas and 40 percent had lung spread from the pancreas. Do you know that?
A I don't know if that was a question or what?
Q Well, do you know whether there are reports in pathology textbooks of pancreatic cancer spreading to the lung?
A There are -- I'm sure there are, sir.
Q And, Doctor, would you agree that there are things reported in textbooks and in medical literature that are beyond your personal experience?
A Sure.
Q Cancer that starts in the pancreas can spread to the lung and simulate a primary lung cancer, can't it?
A I've never seen a case.

Q Let me hand you, Doctor, an article from the Journal Cancer in 1990 entitled, "Metastatic

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Carcinoma of the Pancreas Simulating Primary Bronchogenic Carcinoma." Why don't you read the first paragraph for us.

A "For many years occult extrathoracic malignancies have been recognized to simulate bronchogenic carcinoma." The whole paragraph or first sentence?

Q Sure.

A "Pancreatic carcinoma, especially of the body or tail, has been reported to be the most frequent cancer-simulating bronchogenic carcinoma. In addition, pulmonary metastases occur in 30 percent of all extrathoracic malignancies. These metastases appear as solitary or multiple lesions on routine X-ray. Clinically, radiographically they can be indistinguishable from primary bronchogenic carcinoma."

Q All right. Doctor. Am I correct that at your hospital you don't typically treat women with breast cancer?

A I will take care of them when they're on the

wards, and I will see them over at Wishard Hospital when I'm staffing the clinic over there.

Q Breast cancer is a cancer that can spread to the chest wall, the bone and the lung; is that right?

A Correct.

Q Can spread to the bronchus; right?

A Rarely.

Q Endobronchial metastases from primary breast cancers have been reported, though, in cases of people with breast cancer; right?

A Yes.

Q And, Doctor, a metastasis from a primary breast cancer to the bronchus can be mistaken for a primary lung cancer, can't it?

A It would be very -- there -- probably be a physician who is not very skilled could be mistaken.

Q Doctor, a lot of what you and other doctors do involves matters of judgment, doesn't it?

A Correct.

Q Different doctors could look at the same records, the same X-rays and the same

pathology material and come to different conclusions; right?

A Correct.

Q It wouldn't surprise you to know that a reasonable clinician could look at this same information and agree that Mrs. Wiley's cancer started in the pancreas and spread to the lung; isn't that right?

A I think a reasonable -- as I said yesterday in my deposition, I dare say or I doubt that a reasonable clinician would come up with a

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diagnosis that this is -- that this is pancreatic cancer.
Q Doctor, let me ask you this: In all the cases of cancer that you've been involved in, have you ever seen cases of adenocarcinoma of the lung that starts in the lung?
A Yes.
Q Primary adenocarcinoma of the lung?
A Yes.
Q Have you ever seen a case of primary adenocarcinoma of the lung, a cancer that starts in the lung, spread to the pancreas?
A Have I?

Q Yes.
A No.
Q And it is a fact that adenocarcinoma was found in Mrs. Wiley's lung and in Mrs. Wiley's pancreas on autopsy?
A It was -- the records that I have that were available to me, it was found in the peripancreatic lymph node.
Q So you haven't reviewed Dr. Kocoshis' deposition?
A Did not review his deposition, but either way --
Q You don't know --
MR. MOTLEY: Excuse me, Your Honor, he was in mid-sentence.
Q Go right ahead.
MR. MOTLEY: He said either way something.
A Either way, this was a one centimeter lesion that was in or near the pancreas.
Q So you don't know what Dr. Kocoshis or any other pathologist, including those who the plaintiffs' lawyers brought to court, testified about the presence of cancer in the pancreas as opposed to the

peripancreatic lymph nodes?
A I did not read his deposition.
MR. OHLEMEYER: That's all I have, Your Honor. Thank you.
THE COURT: Redirect, Mr. Motley?
MR. WAGNER: I've got a couple questions here first for the good doctor.
THE COURT: Mr. Wagner.

CROSS-EXAMINATION,
BY MR. WAGNER:
Q Now, Doctor, you reviewed the medical records in this case, and you saw that Dr. Turner, who performed the bronchoscopy on Mrs. Wiley, concluded that Mrs. Wiley had an endobronchial lesion; right?
A Yes.
Q And as you told us last night, that's the only thing you have to go on is that there was a cancer, a lesion in the bronchial airways of Mrs. Wiley; right?

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A No. I mean --
Q Do you disbelieve that Dr. Turner found a cancer in the bronchial airways of Mrs. Wiley?
A I'm sorry. Your question originally is the

only thing I had to go on was the fact that that bronchoscopy --
Q Let me withdraw that question. Let me withdraw the question. The question, Doctor, is: You've read Dr. Turner's bronchoscopy report; correct?
A Yes.
Q You read Dr. Turner's bronchoscopy report that states that she saw a neoplastic process in the bronchial airways; is that correct?
A Yes.
Q And do you believe that she did?
A I have to take at face value what she said she saw.
Q All right. Now, you told this jury that one of the things that you depend upon for your diagnosis of primary lung cancer is the X-ray that shows a mass in the right lung; right?
A Correct.
Q Now, the fact that there is a mass in the right lung indicates to you that it may be cancer; is that correct?
A Correct.

Q But the fact that there is a mass in the right lung doesn't tell you where that cancer originated, does it?
A Is this hypothetical or in this patient?
Q I'm talking hypothetical, that's correct.
A Hypothetically, a mass in the lung.
Q If you don't know anything except the fact that there is a cancer in the right lung, a mass shown on X-ray, that doesn't tell you that it originated there; isn't that correct?
A In a hypothetical situation, correct.
Q Now, do you know, Doctor, that when Dr. Turner -- let me back up for a minute. Do you know from the medical records that you reviewed that Dr. Patel also performed a bronchoscopy on Mrs. Wiley?
A Yes.
Q And do you know what kind of pathological specimens Dr. Patel took?
A He got some brushings and washings, I believe.
Q I think you're wrong, Doctor. All he got was washings. Do you recall that?
A I'd have to verify in the records there.

Q Let's assume -- you assume with me then, because the jury has already heard this,

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that all he got were washings, and do you know what he did with those washings?

A He sent them to cytology.

Q He sent them to cytology and the cytology was negative for cancer; isn't that correct?

A Correct.

Q When Dr. Turner performed her bronchoscopy, what kind of pathological specimens did she get?

A She got some brushings and washings.

Q And what else?

A I'm sorry?

Q And what else? Anything else?

A I'm trying to remember. I can't remember off the top of my head. I'd be happy to review the notes.

Q Well, Doctor, in your thorough review of the medical records in this case, did you overlook the fact that she also got a biopsy of tissue?

MR. MOTLEY: Excuse me one second. There is no reason for Mr. Wagner to cut the witness off and raise his voice like that.

MR. WAGNER: Counsel is exactly correct. It must be the hour and my short temper.

THE COURT: Rephrase your question.

BY MR. WAGNER:

Q Let me rephrase, Doctor, and I apologize. Do you recall that Dr. Turner got a biopsy of tissue as well as washings and brushings?

A What I recall is she looked in there, the scope got full of mucous and wasn't able to complete the biopsies that she wanted to accomplish, but I recall that this was negative. All of this failed to reveal any malignancies.

Q As a matter of fact, Doctor, the washings and brushings and the tissue biopsy obtained by Dr. Turner when she did her bronchoscopy were all examined by a pathologist; isn't that true?

A Yes.

Q And they were all negative for cancer; isn't that correct?

A That's what I just said, sir.

Q Now, Doctor, one of the things that you said

was that Mrs. Wiley presented at Ball Memorial Hospital and she was coughing up blood; is that right?

A That's what the records state.

Q Let me show you one of the medical records. Do you recognize this as a medical record that was created by Dr. Walker?

A That's what it says.

Q And have you seen this before?

A No.

Q This wasn't furnished to you by plaintiffs'

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counsel?
A This is -- it may have been, and this may have been something that I overlooked, but I don't recall reviewing this in the last 24 hours.
Q You told us last night you threw away some of the medical records, didn't you?
A I threw away a lot of depositions.
Q Did you throw away any of the medical records?
A I may have, sir. In fact, I'm sure I did, because we have nursing notes and many other IV records, and those are things that are too heavy and arduous to go through, to be

honest with you.
Q Turn to the first page of this document. This is an admission note, is it not, made on May 29, 1991, by Dr. Walker?
A Correct.
Q And you see the section entitled "Review of Symptoms"?
A Yes.
Q And you see the third sentence there? Can you read that to us.
A Third sentence: The patient does not describe chest but has a persistent cough?
Q No. Excuse me, Doctor. It's under the review of symptoms section.
A That's what I'm reading, review of systems.
Q The first sentence says she denies fever or night sweats and she had weight loss in the recent past.
A Right. Second sentence says she has had weight loss. The third sentence says the patient does not describe chest pain but has persistent cough.
Q Then what's the next sentence say?
A Earlier in the syndrome she had a degree of hemoptysis but this is now resolved.

Q And hemoptysis is what?
A A coughing up blood.
Q So when she entered Ball Memorial Hospital, actually her coughing up blood had resolved at some unspecified period before then; right?
A Yes. Appears so. Or it resolved within the last 15 minutes.
Q Or it had resolved maybe in the last 20 days? You don't know, do you?
A Not based on this note.
Q Now, Doctor, you're not telling this jury, are you, that elevated blood sugar is not a symptom or possible symptom of pancreatic cancer, are you?
A Elevated blood sugar can occur in patients with pancreatic cancer.
Q All right.
A When one sees an elevated blood sugar, however, one does not think of pancreatic

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cancer. There are many other reasons for an elevated blood sugar.
Q What doctors think of when they try to do differential diagnoses on patients is to take the entire clinical picture and look at

it, don't they?
A Try to, sir.
Q And that's what you try to do, too, don't you, Doctor?
A Correct.
Q Do you know what the most frequent site of metastasis is from the pancreas?
A Most frequent site would be the regional lymph nodes. Most frequent organ would be the liver.
Q Let me show you an article --
MR. WAGNER: And I don't have another copy, Counsel. I've only got one.
MR. MOTLEY: That's all right.
Q Let me show you an article from the Archives of Surgery. Do you recognize that as a publication that publishes articles in the medical profession, authoritative articles?
A It's a publication that usually doesn't get some of the best articles, to be honest with you.
Q You're not a surgeon, are you, Doctor?
A No.
Q And will you turn to page 128.
A Yes, sir.

Q Now, at 128 there do you see over in the left side in the left column in the second full paragraph it talks about 138 patients in group one; right?
A I'm sorry. I wasn't -- where do you want me to look?
Q Let's back up.
A Table 6?
Q Let's back up for a moment. This is an article entitled on the first page, "Observations on the Developmental Patterns and the Consequences of Pancreatic Exocrin Adenocarcinoma"; right?
A Yes.
Q So this is an article about adenocarcinoma in the pancreas; right?
A Right.
Q And on page 128, in the left-hand column, it talks there about, of 138 patients in group one -- do you see where I'm reading from in the second paragraph? Page 128, Doctor?
A 128 patients in group one, right. I'm sorry.
Q Of the 138 patients in group one, hepatic or other remote organ metastases were found in

117. Do you see that?
A Yes.

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Q The spread presumably hadn't occurred by primary or secondary hematogenous route. That's blood; right?
A Hematogenous?
Q Thank you very much. It says the liver was the most frequent site of metastasis being involved in 67 percent of the cases; right?
A Correct.
Q So that means in 33 percent of the cases the liver was not involved; right?
A It seems so.
Q And then in the -- in the right-hand column there, the first paragraph, can you read the first sentence there?
A 46 --
Q No. The first paragraph. First full paragraph. First sentence.
A Not the one about the hepatic metastases in the pulmonary mets. The next one after that?
Q Yes, sir.
A The lung is the next most site of remote metastasis.

Q The lung was the next most common site of remote metastasis; right?
A Right.
Q So what this article tells us is in these cases that were studied, the lung following the liver, was the second most common site of metastases from the pancreas; right?
A To be honest with you, sir, and to be very polite, and I don't mean to be rude, but if you want me to review the article, I want to read the whole article rather than just taking snippets. It is not fair to me, it's not fair to the jurors for you to take out certain parts because there are other paragraphs here which I think are equally important. If you would like me to recess and allow me to read this, I would be happy to do that, sir.
Q Doctor, when you were asked to become a witness in this case, were you asked to be a rebuttal witness?
A That may have been a term used.
Q And you were asked to be a rebuttal witness about what, three or four months ago; was that right?

A No.
Q When were you asked to be a rebuttal witness?
A I got -- as I said last night, I don't remember. I have many phone calls and many things. I said a couple months ago. I don't remember when it was. Sometime in the last couple months I got a phone call from Mr. Young and asked me to -- would I be willing to review records concerning whether or not this case resolved around pancreatic

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cancer or lung cancer.
Q And what the defendants in this case had an opportunity to do with you was to depose you for an hour and a half last night; isn't that right?
A Correct.
Q And that was a limitation that was imposed upon us at that time?
MR. MOTLEY: I'm sorry, what was that?
Q That was a limitation that was imposed upon us in terms of how much time we had to depose you. Do you know that, Doctor?
A I didn't make arrangements for this.

Q All right. And, Doctor, you believe, do you not, that you could find a reasonable clinician that would agree that this started down in the pancreas and spread to the lung? And what we're talking about when "this" was Mrs. Wiley's cancer; isn't that right?
MR. MOTLEY: What page, sir?
MR. WAGNER: I'm sorry. Page 73.
MR. MOTLEY: May I have a second, Your Honor?
May I hand this to the witness, Your Honor?
THE COURT: Sure, go ahead.
MR. MOTLEY: I believe this is what Mr. Ohlemeyer has already asked him about.
MR. WAGNER: I think Mr. Ohlemeyer framed the question a little bit differently, Your Honor.
Q Let's look at your testimony at page 73 last night, Doctor. Do you see that on page 73, the question?
A Yes.
Q "How is one to decide who is right and who is wrong when two doctors look at the same information and come to different opinions?"

And you answered, "Again, this goes down to specifics, I think. It's up to the jury to decide, isn't it?
"Question: Well, is there any way -- I mean, that's my question. Is there a right or a wrong here or are we dealing with matters of judgment upon which reasonable doctors could disagree?"
And you answered: "I would -- I would dare say you could find a reasonable clinician that would agree that this started down in the pancreas and spread to the lung."
Is that the answer you gave, sir?
A It is.
Q And you were under oath last night?
A Yes. If I could make -- if I could make a statement, though, sir.
MR. WAGNER: Your other attorneys can ask questions if you like.

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Thank you, Your Honor.
THE COURT: Any redirect,
Mr. Motley?
REDIRECT EXAMINATION
BY MR. MOTLEY:

Q Doctor, do you know whether the Judge issued a ruling about how much time we could spend with you last night?
A That was my understanding.
Q What do you mean by -- read that to the jury, please.
A "I would dare say that you would find a reasonable clinician that would agree that this started down in the pancreas and spread to the lung."
Q What does "I would dare say" mean to you?
A Well, I am -- actually, I know what I meant in my heart when I said this and part of this is the fact, may be the fact that I went to Purdue and my vocabulary isn't good. When I meant I dare say, I meant I doubt.
Q I don't know want to touch that one or not. The Judge likes it, I'm sure.
A But what I mean by that is I doubt. And I probably shouldn't have used fancy words, but I doubt is what I meant. And that's how I used that term. And again, it may be the way my mother brought me up and it's probably wrong grammarically, but in my word, dare say means doubt. I would dare

say that you could find somebody. I could read it again using doubt and that's what the intention of my statement was. I would doubt that you could find a reasonable clinician that would agree that this started down in the pancreas and spread to the lung. I apologize for the grammarical problems.
Q That article you said you wanted a second to look at, do you have it in front of you?
A Yes.
Q Is there something in there that you wanted to bring to the jury's attention, Doctor?
A Well, we -- just -- we review articles routinely. We have a Journal Club at Indiana University and we go through articles, and we will spend a long time going through articles and looking for advantages and disadvantages of the articles and some of the truth.
And I -- one of the things, as you're talking about remote aspects of the tumor, what that means is tumors metastasis outside of what would be the commonly seen things. And most of these tumors are going to be tumors that are going to spread within the

abdomen or in the liver.
And it said 46 percent of the patients

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with hepatic metastases also had pulmonary metastases, which was the sentence above that, meaning that this travels to the liver. And particularly, in the old days, in the very -- in the autopsy days when many of these patients were done, because this included patients back from 1952 before we had the era of CAT scans, these are patients who had widespread disease and died of their cancer. But in these cases, most of the patients who ended up having lung metes had liver metastases before they went to the lung. It was not a situation where they just had, again, most of the patients having isolated, a tiny focus in the pancreas, no spread within the abdominal cavity at all and going to the lung.

So, again, I would love to spend more time with this and debate, but, obviously, it's not fair to do that to you guys.

Q Doctor, you said you threw away depositions -- I mean, did you have a big box of stuff with you last night?

A I had this briefcase.

Q And prior to you coming here last night, you threw away some depositions?

A Yes.

Q Were they important to your opinion?

A I didn't want them to influence my opinion. I basically, to be honest, I didn't -- from my perspective, I just wanted to look at the records, look at them as clearly as I could and decide whether or not I thought this was lung cancer, pancreatic cancer, and give you an honest opinion. And I didn't want to hear a lot of the other opinions, you know, from your side or from -- other than to understand some of the opponents on this particular aspect of the case.

Q Doctor, did you throw away anything -- and you used the word "throw away --" anything of importance to the diagnosis and treatment of the case of Mildred Wiley?

A I don't believe I did, sir.

Q Why would you throw it away if it was important?

A I wouldn't.

Q Now, you were asked about the biopsy that

Dr. Turner performed, do you remember that, on June 6th, 1991?

A Yes.

Q Can we show that, please.

Can you focus in on this? It says necrosis. What does that mean, sir?

A Necrosis just means dead tissue.

Q With atypical cells?

A Correct.

Q That means untypical, if I can speak like a South Carolina graduate.

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A Unusual, ugly-looking or not usually normal cells.
Q Okay. And then see the comments, he says due to the small amount of tissue, can you read that?
You need to focus it a little bit. If you got to start to the left to right, do it that way. There you go.
"Due to the small amount of tissue and poor preservation, an unequivocal diagnosis of carcinoma cannot be made. If this is a clinical likelihood, I would consider a repeat biopsy if clinically indicated."
Now, Doctor, do you know from the

records whether Mrs. Wiley protested that she couldn't take any more intrusive measures because of her pain?
A Yes.
Q Do you know if she did? Do you know she protested?
A From what I can gather in the records, yes. And I also understand eventually the family just wanted to give her supportive care measures.
Q And can you read this in any way to say that she had a normal bronchus?
A No. This is -- because it's non-diagnostic doesn't mean that it is diagnostic of no disease. There's a difference.
Q They asked you about these medical records of when she was admitted in May. Do you remember that?
A Yes.
Q The admitting physician, what did they write with respect to whether or not she was coughing up blood?
A Persistent cough with hemoptysis.
Q And that means what?
A She had a cough and she was coughing up

blood.
Q Is that consistent with what you told the jury?
A Yes. I think the significance of it is that once you're coughing up blood, it needs to be evaluated. Whether it temporarily stops or not, it is something that is still something that's wrong and needs to be evaluated.
Q You were asked about the pathology slides. Do you remember that?
A Yes.
Q Did you look at the pathology slides yourself?
A Yes.
Q And what did you find?
A Well, I found --
MR. OHLEMEYER: Objection, Your Honor, lack of foundation. The man has testified he's not a pathologist.

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MR. MOTLEY: He don't have to be a pathologist. We've already demonstrated that in this trial.

THE COURT: Overruled.

Q Did you look at them?

A Yes, sir.

Q And what did you find?

A Well, I found the focus of -- particularly, I was looking at the tumor in the pancreas, which was about a centimeter in size, which is very small, less than a half an inch, and it had adenocarcinoma in them.

Q Now, Doctor, as a clinical oncologist, if you've got somebody with a patient -- excuse me. It's late.

If you've got somebody with cancer, who manages the care of a cancer patient? What kind of doctor?

A It depends. I mean, I think in early stages of cancer, the surgeon may be the one that's the captain at that point in time and they would manage that by doing surgery. In patients with advanced disease, generally it's going to be the medical oncologist that is going to be the captain of the team.

Q Captain of the team.

Finally, sir -- not finally. Are you satisfied that you had an opportunity to review sufficient evidence to give the jury your opinion?

A Yes.

Q Did anything you were asked here on cross-examination change your opinion that this was a no-brainer?

A No.

Q Final question now. Mr. Ohlemeyer said -- asked you about this top ten, and when you started talking about it, you said that was not your phrase; right?

A I also -- I guess, for the record, was a little bit insulted by those questions. I take care of cancer patients every single day, and I'm in the line with them. I do not find the illness funny in any aspect. What I have to tell you, the thing that patients love the most from me is that I have a sense of humor, and I'm able to laugh with them and joke with them and talk to them about their illnesses.

And it's because of that, because I don't want them to die a morose death, that I'm involved with their care, that I am able to laugh and joke about the disease, but I do it with them, not at them.

And, yes, I do joke, and I make a lot

of jokes with patients, and they like me for that. As a matter of fact, they prefer

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having me than many other doctors who are very serious.

MR. MOTLEY: No further questions.

THE COURT: Mr. Ohlemeyer?

RECROSS-EXAMINATION

BY MR. OHLEMEYER:

Q Doctor, don't you think it would have been important to consider or to know what the pathologist who conducted Mrs. Wiley's autopsy had to say about the autopsy?

A I had the autopsy report and the microscopic sections from that.

Q So you don't know whether or if the doctor who conducted the autopsy testified as to whether there were any omissions or mistakes in that autopsy report, do you?

A I do not know that, sir.

Q Doctor, the first question I asked you last night was will you let me know if you don't understand a question I ask you, wasn't it?

A It could be.

Q The last question I asked you was, "Is there a right or wrong here, or are we dealing

with matters of judgment upon which reasonable doctors could disagree?"

And your answer was, "I would -- I would dare say you could find a reasonable clinician that would agree that this started down in the pancreas and spread to the lung."

Wasn't that your answer?

A To be -- I'm sorry. I'm getting used to this lawyer stuff.

Q Weren't those the words?

A I'm going to say asked and answered because I've heard this before.

Q Weren't those the words?

A Those were the words.

Q The words that you used to answer my question, Doctor, weren't they?

A Yes, they were.

MR. OHLEMEYER: That's all I have, Your Honor.

MR. WAGNER: And I have two short ones.

RECROSS-EXAMINATION,

BY MR. WAGNER:

Q Doctor, reviewing -- Mr. Motley asked you

about the biopsy, and I asked you about all the pathological specimens, and the one I think I forgot to ask you about was the sputum cytology. Did you see in the records that sputum cytology was performed and Mrs. Wiley?

A Yes.

Q And that also was negative for cancer, wasn't it?

A Yes.

Q And, Doctor, there was an autopsy performed

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in this case, wasn't there?
A Correct.
Q Did you review the autopsy report?
A Yes.
Q And it's a fact, isn't it, Doctor, that the autopsy report does not indicate any findings of cancer in Mrs. Wiley's bronchial airways; isn't that correct?
A She had cancer in the hilum of the lung and in the lung itself, the lung perikyma, the lymph nodes around the hilum of the lung.
Q The question is, Doctor: The autopsy does not indicate any findings of cancer in the bronchial airways of Mrs. Wiley, isn't that

correct?
A They didn't mention any, correct.
MR. WAGNER: That's all I have, Your Honor.
MR. MOTLEY: May the witness be excused, Your Honor?
THE COURT: Pardon me?
MR. MOTLEY: May the witness be excused?
THE COURT: The witness may step down. Thanks for coming today. I appreciate it.
MR. MOTLEY: Your Honor, we conclude our rebuttal case. I don't have anything else.
Judge, this really -- I don't know if this has got to do with rebuttal or not, and I don't want to take up the jury's time, but it was a matter of the financial information that we left hanging from when we closed ten-days ago.
THE COURT: Approach.
(Bench discussion)
THE COURT: No other rebuttal witnesses, Mr. Motley?

MR. MOTLEY: No, Your Honor.
THE COURT: Plaintiff rest the rebuttal case?
MR. MOTLEY: Yes, Your Honor.
THE COURT: Any surrebuttal, Mr. Ohlemeyer?
MR. OHLEMEYER: No, there is not, Your Honor.
THE COURT: All right. Ladies and gentlemen, as I had hoped last Friday, we have concluded the evidence in this case. Do not begin your deliberations, however, because, as you know, tomorrow and part of Wednesday we will hear arguments of counsel. I will read the final instructions sometime probably Wednesday afternoon. The case will be given to you at that point to deliberate.
Remember, tonight don't read anything in the newspaper, don't listen to anything on the radio or on television. Leave your notes in the jury room, don't form or

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express any opinion about this case until it's given to you to deliberate.

As I indicated Friday, we are going to start tomorrow morning at 8:00 a.m. Is

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everybody okay at 8:00 to start tomorrow? We're going to start at 8:00, and I realize it's late. Some of us are going to stay for a while, but you get to go home. So have a good evening. I'll see you tomorrow morning at 8:00.

MR. CASSELL: All rise.

THE COURT: Jury is not present. I would appreciate having a representative or two from plaintiffs, a representative from the manufacturing company, a representative from the holding company join me in the conference room at about 8:15 and we will discuss instructions. And I realize a lot of you are getting ready for arguments, and I do not expect that you all be there. That's why I say a representative.

We'll deal with some instruction issues and I'll hear some comments. We'll do it first on an informal basis, and then we'll make the formal record later.

Mr. Ohlemeyer, anything else to come forward?

MR. OHLEMEYER: Yes, two things. I'd like to move to strike Dr. Loehrer's

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testimony. Neither this witness nor the issues upon which he testified were unknown or unanticipated to the plaintiffs in advance of this trial, and based upon the authority previously put before the Court and for the reasons previously stated, I would make that motion.

And also the defendants collectively and individually would renew their trial Rule 50 motions for the reasons previously stated and those that may be added to those in the written pleadings that I presume everybody will file promptly this evening or first thing in the morning.

THE COURT: Are you telling me you're going to file written pleadings?

MR. OHLEMEYER: Yes, I think we have a written motion. For the most part, they incorporate by reference the memorandum of points in authority previously put before the Court for the manufacturers. I don't know if the holding companies have different issues than that at this point, but with respect to the motion that was filed on behalf of all defendants, we incorporate by

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reference the points in authorities previously put before the Court.

THE COURT: All right.

MR. SHOCKLEY: Your Honor, I have one for American Brands to file.

THE COURT: All right. Mr. Bryon?

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MR. BYRON: We have one for CTR, Judge. And is it possible, could I attend the instruction session?
THE COURT: Certainly.
MR. MOTLEY: Your Honor, I take it --
THE COURT: I'm not telling anybody they cannot attend the instruction session.
MR. MOTLEY: You were looking for nominees to attend this meeting who know something about the law.
THE COURT: I was.
MR. MOTLEY: May I be excused?
THE COURT: Anyone else have any renewed motions?
MR. BYRON: Yes, Your Honor. Judge, again, this is CTR. We have a new issue put forth in our motion, so I want to alert the Court. It pertains to the

punitive damage issue.
THE COURT: All right.
MR. KIM: Your Honor, RJR Nabisco Holdings is also renewing its motion as well as moving for the exclusion of certain evidence that's already been admitted.
THE COURT: Moving to strike?
MR. KIM: Yes, Your Honor.
THE COURT: All right. Thank you, Counselor.
MR. McNAGNY: Judge, Charles McNagny for the Tobacco Institute. We're renewing our prior motion and also joining in the joint defense motion Mr. Ohlemeyer has filed.
THE COURT: All right. We'll show that, Counselor.
Mr. Reynolds?
MR. REYNOLDS: Your Honor, on behalf of BAT Industries, we're filing a motion. I would like an opportunity to present to the Court some additional matters relating to the defense of statute of limitations and limitation of actions.
THE COURT: Do you want to do that

now, Counselor?
MR. REYNOLDS: I can do it now if you prefer, although with all this going on, you might prefer to have it when the atmosphere is less with everybody talking.
THE COURT: How long do you need?
MR. REYNOLDS: I'd say four minutes.
THE COURT: All right. Let's get everything stamped here, and then I'll hear your additional matters, Mr. Reynolds.
(Discussion off the record)
THE COURT: We're still on the record, Counsel.
Mr. Reynolds, I believe you have a motion?
MR. REYNOLDS: Yes, Your Honor. We

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have presented a motion for judgment on the evidence. I see no reason to argue any other parts of the motion. We're also incorporating by reference to motion on behalf of all defendants. I would like to have a few words about the statute of limitations.

THE COURT: Go ahead, Counselor.

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MR. REYNOLDS: I'll be very quick.

First, I want to emphasize that the burden of proof in both the death case and the loss of consortium case rests with the plaintiff under the circumstances of this record. Once it is shown in the record that two years have passed with regard to the loss of consortium and the fact is the burden of proof is always with the plaintiff under the statute on wrongful death and there are cases cited for that.

The main point I want to bring to the Court we did not discuss the last time is that it is not considered a mistake under Rule 15(c) if, in fact, the plaintiff has a lack of knowledge of the party who they are suing; that is true both under Indiana law and many federal cases.

The Indiana cases which are cited in page H of my brief are Hoop vs. Hill which says relation back is not allowed when the plaintiff has no knowledge of the proper party; and Burns Construction Company vs. Miller which says there is no relation back when there is a lack of knowledge of the

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proper party.

As you know, in the case of this particular rule, federal authorities are cited with approval by the Indiana courts. Let me give you some samples.

Worthington vs. Wilson, cite is page 7, "Because Worthington's failure to name Wilson and Wall was due to a lack of knowledge as to their identity, and not a mistake in their name; Worthington was prevented from availing himself of the relation back doctrine of Rule 15(c)."

Wood vs. Worachec -- both of these are 7th Circuit cases. "Rule 15(c)(2) permits an amendment back to relate back only when there has been an error made concerning the identity of the proper party and where that party is chargeable with knowledge of the mistake; but it does not permit relation back where, as here, there is a lack of knowledge of the proper party. Thus, in the absence of a mistake in the identification of the proper party, it is irrelevant for purposes of Rule 15(c)(2) whether or not the purported substitute party knew or should

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have known that their action would have -- that an action would have been brought

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against him."
Jacobsen vs. Osborn in the 5th Circuit. "Rule 15(c) does not allow an amending complaint adding new defendants to relate back if the newly-added defendants were not named originally because the plaintiff did not know their identities";
Rendall-Speranza vs. Nassum, which is a D.C. Circuit case, "In the adversarial system of litigation the plaintiff is responsible for determining who is liable for her injury and for doing so before the statute of limitations runs out; if she later discovers another possible defendant, she may not, merely by invoking Rule 15(c), avoid the consequences of her earlier oversight"; Barrow vs. Weathersfield Police Department, which is the 2nd Circuit, "Rule 15(c) does not allow an amendment to relate back if the newly added defendants were not named originally because the plaintiff did not know their identities"; Rylewicz, which I'm no doubt mispronouncing, vs. Beton

Services, Limited, which is another 7th Circuit case, "Although when filing this original complaint, Rylewicz may have had a 'lack of knowledge of the proper party' that factor does not permit an amendment to relate back under Rule 15(c). Such an argument misconstrues the mistake requirement of Rule 15(c)."
Your Honor, it is crystal clear in this case that this is not a misnomer, it's not a mistake in naming parties. You recall the Honda case, the Chevrolet case, the Neal case, all of those can't be -- the Kaylor Nickel Clinic case, all those Indiana cases involve true misnomers where they named the wrong parties. In some cases they named the right party but they intended to sue a different party as well, which was certainly the case in the Honda case.
In this case, if they intended to sue the parent company of Brown & Williamson, which is their contention, somebody should have been named. If there was a mistake in the party. And you'll note this is not a case where you could have a mistake between

the names. There is absolutely no comparison between Brown & Williamson on the one hand and BAT Industries on the other. There is no chance of being confused about the name.
And under those circumstances, it seems to me that they cannot profit from Rule 15(c) in the evidence in this case and the burden is on them.
Another thing is that due diligence is required. We've covered that in our brief. I have handed Your Honor one of the many things that appear that tells one if one

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chooses to do so, what is the parent corporation of another corporation.

This particular thing is Standard and Poor's, which is a name I suspect everybody in this courtroom recognizes, this is a book that's published every year. I will represent to the Court that copies of the book are in the Muncie Public Library. They're at the Ball State Library, they're at the Indianapolis library, they're at the IUPUI library, each of them shows in the relevant years, 1991, 1992, 1993 --

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incidentally they don't have those because Standard and Poor takes the old one back when they gave them the new one. They have the 1998 now. All of them clearly show that the parent corporation of Brown & Williamson was my client. You have the annual statements which also show the circumstances of that relationship.

The one other thing that I think is important is one of the things that the plaintiff must show, having the burden of proof, is that my client should have realized when the complaint was filed against Brown & Williamson -- assuming, of course, that they even had knowledge of it between the 4th of June and the 28th of June -- that they intended to sue us. How could we possibly have had that knowledge? If they wanted to sue the parent, there were all kinds of ways they could find out who the parent was. They did not sue all of the parents in the lawsuit. There was another parent they didn't sue.

We are over in England. They may have thought they had jurisdictional problems.

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You don't presume that they intended to sue us under those circumstances. And there are a number of other reasons that we've given in the brief and I know it's late in the evening and everybody is tired, including me, although I worked very hard this day. And so I will conclude my argument there.

But, Your Honor, if I may borrow a phrase, so far as the question of can you Rule 15(c), where they simply don't know who the party is, that is a no-brainer. Thank you.

THE COURT: Thank you, Mr. Reynolds.

MR. TITTLE: Your Honor, five seconds, I promise. Dave Tittle on behalf of Philip Morris Companies, Inc., we have essentially, if not precisely the same issue as Mr. Reynolds, and I incorporate his arguments and we have filed a motion to that effect and we urge the same arguments to the Court. Thank you, sir.

THE COURT: Thank you, Mr. Tittle.

I'll see Counsel at about 8:15 in the

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conference room. Thank you very much.

(The proceedings were adjourned at 6:45 p.m. to be reconvened March 17, 1998, at 8:00 a.m.)

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AB1-AB6	9035	
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AB7, AB8	9037	

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